RIB BRANCHING IN ATRYPA RETICULARIS

by

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ABSTRACT:

The rib branching patterns of the brachiopod Atrypa reticularis from a sequence of 8 groups of strata of Upper Llandovery to Upper Middle Ludlow age from Gotland, Sweden were studied.

The surface of the shells of Atrypa reticularis are marked by 1) ribs which originate at the upper edge of the pedicle opening or, at a point anterior to the pedicle opening, and extend radially to the anterior or lateral margins, and 2) concentric growth lines. The ribs may undergo several bifurcations which, in all cases, occur at growth lines. Ribs which originate at a point anterior to the pedicle opening originate at growth lines. The nature of the rib branching pattern varies from one specimen to another.

An attempt was made to determine whether or not the specimens from each of 4 of the horizons could be divided into two or more mutually exclusive groups - each group having a characteristic type of rib branching pattern distinct from that of the other group or groups. The following method was employed: A correlation coefficient was defined for any pair of specimens, which is an index of the degree of similarity of the rib branching patterns of the two specimens. The correlation coefficients were then computed for all possible pairs of specimens from each of the 4 horizons considered. For each horizon, the frequency distribution of the correlation coefficients of specimens from the horizon was then plotted, and an attempt was made to detect any modality present in this distribution. The

presence of two or more definite modes in a given distribution would imply that, very likely, distinct groupings of the specimens from the horizon are possible - the lowest mode(s) corresponding to the correlation coefficients between the specimens of the same group, and the highest mode(s) corresponding to the correlation coefficients between specimens of different groups. No modality was present, however, in any of the distributions and, thus, it was not possible to divide the specimens from any of the horizons on the basis of the frequency distributions.

Two types of specimens of Atrypa reticularis may be distinguished on morphological grounds in one of the horizons. Although relatively minor differences were noted in the branching patterns of the two groups, each of these groups appears to exhibit the same degree of homogeneity in the patterns of branching as is exhibited by the specimens of both of the groups considered as a unit.

The frequency distributions of the correlation coefficients of the four horizons were seen to shift slightly to the right as a function of time and, the mean value of the correlation coefficients of the four horizons was seen to increase as a function of time. Both of these results are considered as consistent with an overall trend of an increase in the degree of homogeneity present in the patterns as a function of time.

For each of the four horizons, the great majority of the correlation coefficients were found to lie between

.25 and .75. This is considered to indicate that the patterns show a definite amount of variation from one specimen to another, and yet exhibit an underlying similarity.

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF ILLUSTRATIONS:

INTRODUCTION:

The following deals with a study of the rib branching of the brachiopod Atrypa reticularis from a sequence of 8 groups of strata of Upper Llandovery to Upper Middle Ludlow age from Gotland, Sweden. The purpose of the study was 1) to determine for each group of strata the nature and range of variation in the rib branching patterns of the shells of Atrypa reticularis contained in it, 2) to determine for each group of strata, whether or not these patterns could be divided into two or more mutually exclusive groups-each group having a characteristic type of branching pattern which was distinct from the type of branching pattern exhibited by the other group or groups, and 3) in so far as possible, to trace the evolution of the pattern of branching during the time interval represented by the sequence of strata which was sampled. The latter involves the determination of changes which occurred in the nature and types of branching and/or statistically significant changes which occurred in the relative percentages of types of branching present, and in the degree of homogeneity present.

STRATIGRAPHY

The stratigraphic sequence from which the fossils studied were obtained is listed below in Table 1 and the number of fossils obtained from each group of strata is also given. The location of the fossil localities referred to below is given in Appendix I (page).

Table 1: Stratigraphy

Standard Sequence	Gotland Sequence	No. Specimens Studied
Middle Ludlow	Eke group	Locality 56G38- 64 specimens
Lower Ludlow	Hemse group	Locality 56G23- 2 specimens Locality 56G25- 14 specimens Locality 56G26- 4 specimens Locality 56G51- 4 specimens
	Klinteberg limestone	Locality 56G27- 9 specimens
Wenlock	Mulde marl	Locality 56G17- 22 specimens
	Slite group	Locality 56G33- 7 specimens
	Hogklint group	Locality 56G50- 2 specimens Locality 56G66- 2 specimens

Table 1 (Continued)

Wenlock	Upper Visby marl	Locality 56047-65 specimens
Upper Llandovery C6	Lower Visby marl	Locality 56034-2 specimens

MORPHOLOGY OF ATRYPA RETICULARIS

Morphological features of the external surface

The surface of the shells of Atrypa reticularis are marked by 1) ribs which originate at the upper edge of the pedicle opening and extend radially from this point to the anterior or lateral margins, 2) ribs which originate on the surface of the shell at points anterior to the upper edge of the pedicle opening and extend to the anterior or lateral margins, and 3) concentric growth lines. At certain growth lines the valves are extended laterally and anteriorly in a tabular surface of frill which projects upwards, and which intersects the main surface of the shell at an angle. Those growth lines which do not now have such associated frills may have initially possessed them-the frills being subsequently broken off.

Both types of ribs may undergo several bifurcations distal to their point of origin. Ribs of the second type listed above may occur either between two posteriorly adjacent ribs of the first type listed, or they may occur within one rib of the first type listed.

Terminology of ribs and rib parts. The following terms are not used in previous paleontologic reports and were defined for the purposes of this study. The term primary rib shall here be taken to mean a rib of the first type listed above, and the term secondary rib shall be taken to

Mean a rib of the second type listed above which occurs between two posteriorly adjacent primaries. The term insert shall be taken to mean a rib of the second type which occurs within primary or secondary ribs. By the term node we shall mean a point at which bifurcation occurs, and by branch we shall mean either 1) that part of a rib between its point of origin and the first node anterior to the point of origin, or 2) that part of a rib between successive nodes, or 3) that part of a rib between an intersection of the rib with the anterior or lateral commissure and the node directly posterior to this intersection. By first order branches we shall mean branches which occur adjacent to the point of origin of the rib containing them. By second order branches we shall mean branches which are in contact posteriorly with first order branches. By n-order branches we shall mean branches which are in contact posteriorly with n-1 order branches. By element we shall mean a branch, or a node, or a point of origin. (See figure 1 for illustration of these terms.

FIGURE 1:

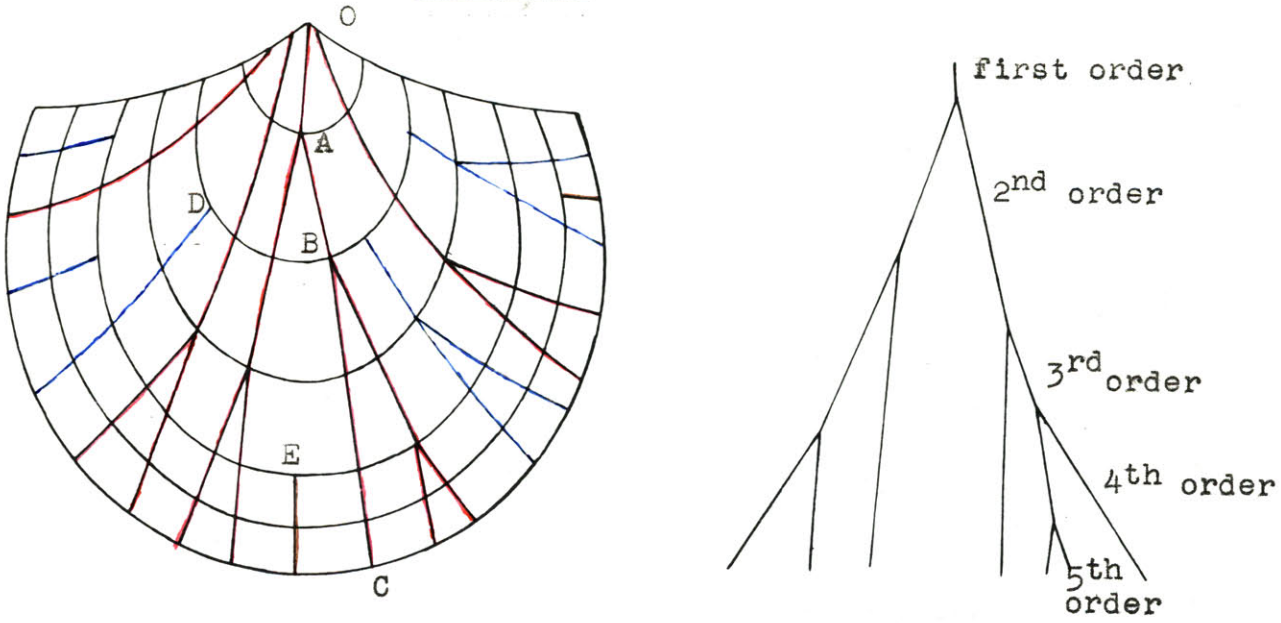
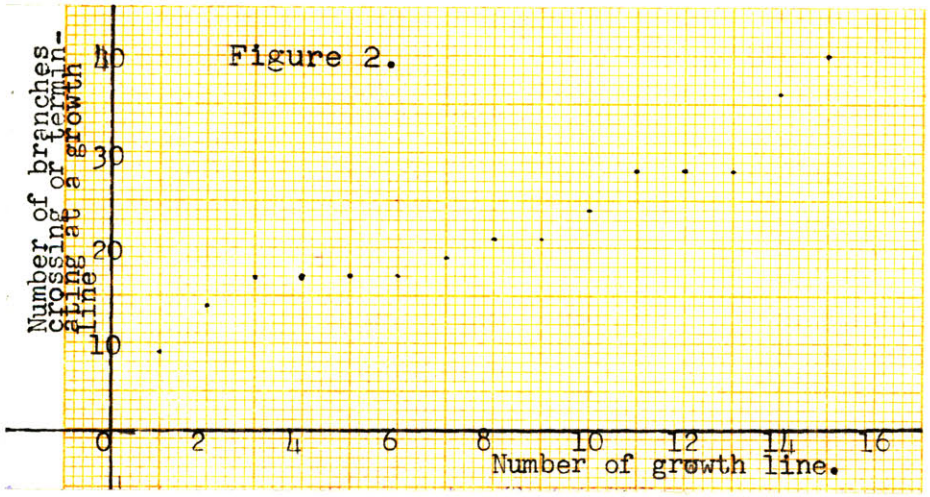


Diagram to illustrate terminology. 1A: Shell outline and growth lines are shown in black. Primary ribs are shown in red. Secondary ribs are shown in blue. Insert ribs are shown in brown. O, E, and D are points of origin. A and B are nodes. AB and BC are branches. 1B: Single rib showing orders of branches.

Discussion of ribs and rib branching pattern. The branches are straight - i. e. they form the geodesic between successive nodes. At any node the two branches which diverge antero-laterally from it are identical in size, and make equal angles with the line formed by extending posteriorly the branch directly above the node. Hence, there is no right or left handedness to individual bifurcations as is the case in groups such as the Dolerorthids studied by Kee*. The branches are essentially uniform in width at a given growth line on a shell and very slightly expand in width distally. The number of branches crossing, or terminating at, a given growth line increases anteriorly as is shown by figre 2 which is a graph of the number of branches crossing, or terminating at, a growth line as a function of the distance from the apex of one of the shells.



*Kee, James W., Rib Branching in Dolerorthid Brachiopods- B. S. Thesis, M.I.T., 1961.

The branches are rounded in cross section and are separated by radial depressions (interplications) which are also rounded in cross section, and are the same size as the branches adjacent to them (except where the depressions taper posteriorly at a node).

Nodes and points of origin of secondary and insert ribs in all cases occur at growth lines. This is an important feature of the branching pattern as it enables one to analyze the pattern in terms of discrete properties as will be seen later.

The branching pattern of the ribs on the pedicle valve is, in all cases, the mirror image of the branching pattern of interplications on the brachial valve, and visa versa. The pattern of both valves have corresponding relationships to the sequence of growth lines. For each branch, node, point of origin, and growth line on one valve there is a corresponding structure of the opposite valve. Unless otherwise stated, all subsequent discussions of the ribs and of rib branching shall be taken to refer to the pedicle valve.

There is, in all but a few cases, a major primary rib which occupies the central part of the shell and diverges anteriorly so as to intercept an angle of about 15-20 degrees on each side of the median line. Such a rib originates in the middle of the upper edge of the pedicle opening. In a few cases there exists two primary median ribs which or-

iginate from the middle of the upper edge of the pedicle opening and diverge from the median line so as to occupy the same region as the single median ribs described above.

Very rarely trifurcation occurs. A trifurcation may be regarded as the limiting case of two bifurcations.

In the overwhelming majority of their occurrences, insert ribs 1) do not occur between the same two branches on a given specimen and 2) do not bifurcate. Inserts beneath the first order branches in median primary ribs are exceptions, in that they occasionally bifurcate when present.

There has never been observed more than 6 primary lateral ribs. There is, in all cases, a maximum of 3 secondary ribs between two given primaries,and a maximum of 3 secondary ribs between one of the lateralmost primary ribs and the lateral commissure. The maximum order of branching for the median primary rib(s) is, in most cases, considerably higher than that of all other ribs. Median primary ribs have branches up to 6th order. Lateral primary ribs have branches up to 4th order. Secondary ribs have branches up to 3rd order but generally up to 1st or 2nd order only.

An important feature of the branching patterns is that they are all asymmetric about the median line. This is in contrast with the rest of the shell features which are bilaterally symmetrical. In some cases the pattern is not

completely asymmetric in that many but not all of the branches on the left side of the pattern have fairly closely corresponding branches on the right side of the pattern.

The number of growth lines on a single shell in the collection studied is generally between ten and twenty. The maximum number of growth lines encountered on a single shell is 35. The growth lines mark the former position of the valve margins and indicate the position of the shell margins during a temporary hiatus of growth.

In the Upper Visby collection there are two distinct classes of specimens. One type has relatively very closely spaced growth lines, relatively very fine narrow ribs, and is, on the average, much smaller in size than the second type. The second type has growth line spacings, rib widths, and overall sizes which lie in the same size ranges as those for specimens from other horizons. From one specimen to another of the same type the width of the ribs as a function of the distance from the pedicle opening varies only negligibly, as does the average distance between adjacent growth lines. The number of growth lines per specimen is on the average much larger for the first type than for the second, and the order of branching is, on the average, slightly higher for ribs on the first type than for ribs on the second. The number of growth line spacings intercepted by branches is, on the average, slightly higher for the first type than for the second.

The specimens from the other horizons may not be subdivided on the basis of the distance between adjacent growth lines, rib widths, the average number of growth line spacings intercepted by branches, or overall size. From one specimen to another the width of the ribs as a function of distance from the pedicle opening varies only neglibibly, as does the average distance between adjacent growth lines, and the average number of growth line spacings intercepted by branches.

Morphological features other than those of the external Surface. The morphological features other than those of the external surface are remarkably uniform throughout the collection. This is true of the relative proportions of the shell dimensions, and of the nature of the shell outline, hinge line, interarea, beak, pedicle opening, and all of the internal structures. The only differences which may be noted in this regard are 1) minor differences in the relative concavity of the valves and 2) the presence of a fold and sulcus in some cases and their absence in others. In some specimens the pedicle valve is flat and the brachial valve is very convex. In others the two valves are equally convex. The collection exhibits a more or less continuous spectrum of relative concavity between these two extremes. In a few specimens the pedicle valve has a very gentle wide sulcus on its anterior part, the brachial valve has a cor-

responding very gentle wide fold on its anterior part, and the anterior commissure is gently sulcate. Most of the specimens have no fold or sulcus and have an anterior commissure which is rectimarginate.

NOTATION

The following notation is used in this report:

Median primary ribs are denoted by C. The lateral primary ribs are denoted by 1L, 2L, ...6L, 1R, 2R, ...6R according to whether they are the first, second, ..., or sixth primary rib to the left/right of rib(s) C.

Secondary ribs are denoted as follows:

1st		SL1
2nd	secondary left of rib C denoted as	SL2
3rd		SL3
1st		SL(3n 1)
2nd	secondary left of rib n1 denoted as	SL(3n 2)(n 1,2,...)
3rd		SL(3n 3)

Notation for secondaries to the right of rib C is obtained by replacing "left" by "right" and "L" by "R" in the above.

Insert ribs are denoted by the letter I followed by the notation for the primary or secondary rib in which they occur.

Branches are denoted by the symbols for the rib on which they occur, followed by an order index in parentheses, and then by a position index in parentheses. The order index of the branch is the number of the order of the branch. The position index of the branch is the number assigned to it by numbering all possible branches of its order for the rib from left to right starting with 1 for the first branch.

Nodes are denoted by the symbols of the branch of which they form the anterior boundary. Points of origin for inserts and secondaries are denoted by the symbols for the rib of which they are the origin followed by (0)(0). Examples: Second order branch on rib 1L with position index 2 denoted as 1L(2)(2). Point of origin of secondary SL6 denoted by SL6(0)(0).

METHOD OF ANALYSIS OF THE BRANCHING PATTERNS

The following method was employed for 1) 65 specimens from the Upper Visby marl, 2) 22 specimens from the Mulde marl, 3) 24 specimens from the Hemse group, and 4) 64 specimens from the Eke group. The specimens of the other four groups of strata were not analyzed by the method as a sufficient number of well preserved specimens was not available.

The branching pattern of each specimen was plotted and a record was made of 1) which ribs, branches, nodes and points of origin are present on the specimen, 2) the number of the growth line at which each node and point of origin present on the specimen occurs, 3) the number of growth line spacings intercepted by each branch present, and 4) the total number of growth lines contained on a valve of the specimen.

The branching patterns of each horizon were then studied in the following manner: For each of all the possible pairs of specimens from the horizon, the two branching patterns of the pair were compared with each other and their similarity noted. An attempt was then made to see whether distinct groups of specimens were present in the horizon on the basis of these comparisons.

Correlation coefficient. A correlation coefficient $C_{k\ell}$ was defined which is an index of the degree of similarity of the branching patterns of any pair of specimens k and ℓ .

For each of the four horizons, all of the possible pairs of specimens from the horizon were then compared by computing the value of the correlation coefficient for the pair.

Frequency distributions of correlation coefficients. For a given set of N specimens from one horizon, (N) (N-1)/2 distinct correlation coefficients may be computed. Assume such a group of N specimens consisted of P subgroups of specimens-the members of each subgroup being markedly similar to each other and the different subgroups being markedly distinct. For such a group the frequency distribution of the correlation coefficients must necessarily be n-modal-the lowest modes corresponding to the correlation coefficients between specimens of different subgroups and the highest modes corresponding to the correlation coefficients between specimens of the same subgroup. The former type of correlation coefficients would be on the average relatively low as the groups are by hypothesis dissimilar. The latter type of correlation coefficients would be on the average relatively high as the specimens within a given group are, by hypothesis, similar.

If, instead, a group of N specimens does not consist of distinct sub-groups then the correlation coefficients for the group would not be of two types as in the previous case. Therefore, the frequency distribution of the correlation coefficients would not be n-modal.

In order to determine for each horizon whether the speci-

mens studied from the horizon do in fact consist of P subgroups of the type hypothesized above, the frequency distributions for the correlation coefficients of the horizon were plotted. These distributions were studied in order to detect any modality present.

Frequency distributions of the correlation coefficients for 1) each of the two groups of specimens from the Upper Visby horizon discussed on page 18, and 2) all of the possible pairs of specimens consisting of one specimen from each of the two groups were plotted, in addition to the frequency distribution of all of the correlation coefficients for the horizon. This was done in order to determine the degree to which the branching patterns of the two groups are dissimilar, and also to determine whether the methods employed would resolve the relatively minor differences known to exist between the branching pattern of the two groups.

The frequency distribution of the correlation coefficients for the 4 horizons were compared with each other in order to detect any overall trend toward an increase or decrease in the degree of homogeneity.

Mean Values of Correlation Coefficients: The mean value μ of the correlation coefficient for N specimens from a given horizon may be defined as follows:

$$\mu = \frac{\sum_{k=1}^{k=N-1} \sum_{l=k-1}^{l=N} C_{kl}}{T}$$

$$T = \frac{(N)(N-1)}{2}$$ = total number of distinct correlation coefficients

The mean value μ as defined above is a measure of the degree of homogeneity of the group of specimens for which the correlation coefficients were computed. Mean values of the correlation coefficients of each horizon were computed and plotted as a function of time, in order to detect any such trends of increase or decrease in the degree of homogeneity.

Correlation coefficients of random data. In order to establish a control to which the frequency distribution of correlation coefficients obtained could be compared, the correlation coefficients for a set of random data was computed. The random data was generated as follows: A table of random digits was used to locate a point in the data matrix for the 64 Eke samples and the number located at the point and the three subsequent numbers were copied. This procedure was repeated until the number of numbers copied equalled the number of numbers in the Eke data matrix. The numbers copied were then put into a matrix, the correlation coefficients for this matrix of random data was computed, and the frequency distribution of the correlation coefficients was plotted.

Partitioning of the matrix of correlation coefficients. Consider again the case of a set of N specimens from one horizon consisting of P subgroups-the members of each subgroup being markedly similar and the subgroups being markedly distinct. Let the correlation matrix be defined as the symmetric square matrix $[C_{k\ell}]$, where

$C_{k\ell}$ = the correlation coefficient between specimens k & ℓ (for $k=\ell$)
$= 0$ (for $k \neq \ell$)

In such a case it would be possible to renumber the specimens such that the numbers of the specimens of each subgroup are consecutive integers. The new correlation matrix $[C_{k\ell}']$ of the renumbered specimens could then be partitioned, as shown in figure 3a for the case P=3, such that 1) regions I,II and III contain correlation coefficients between the specimens of the same subgroup and, hence, would contain relatively high numbers and 2) regions IV and V contain correlation coefficients between specimens from different subgroups and, hence, contain relatively low numbers.

Conversely, given a matrix of correlation coefficients partitioned as above, we may assume that the specimens corresponding to each of the regions I,II, and III constitute a distinct subgroup and that there are P such subgroups.

For the case considered above, the regions IV and V may be further partitioned as shown in figure 3b. Each of the regions IV_1, IV_2, IV_3, V_1, V_2, and V_3 correspond to the correlation coefficients between a given pair of subgroups.

These would all contain numbers which are relatively lower than the numbers in regions I, II, and III but it is not necessarily so that these numbers have exactly the same distribution.

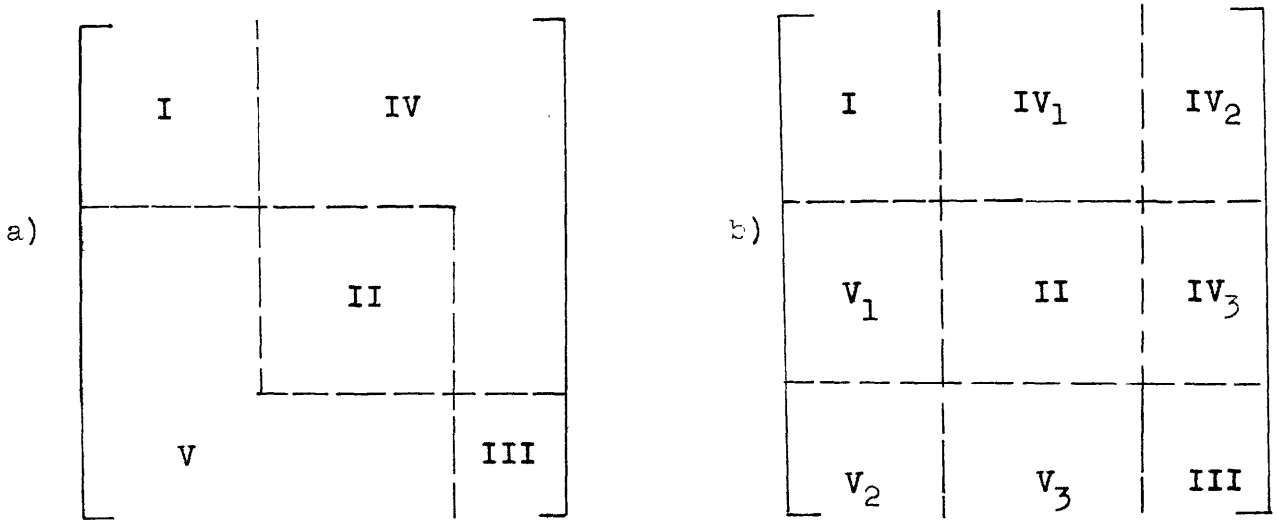


Figure 3. Possible partitioned matrix of correlation coefficients for a group of specimens consisting of 3 subgroups. Regions I,II, & III contain relatively high numbers and Regions IV & V contain relatively low numbers.

If distinct groups were shown to be present in any of the horizons on the basis of the frequency distribution of the correlation coefficients of the horizon, then an attempt was to be made to renumber the specimens as described above. This was to be done using trial and error methods and employing the use of the M. I. T. I.B.M. 709 computer. This was not done as no modality was detected in the frequency distributions.

Terms used in the definition of the correlation coefficient.

The following terms are used in the definition of the correlation coefficient:

For a given primary rib X (X = C, 1L, 1R, 2L, 2R, ...6L, 6R) * on specimen k:

$(n_X)^k_{ij} \equiv$ node X(i)(j) on specimen k.

$(b_X)^k_{ij} \equiv$ branch X(i)(j) on specimen k.

$(G_X)^k_{ij} = G((n_X)^k_{ij}) \equiv$ number of the growth line at which the node $(n_X)^k_{ij}$ occurs.

$(s_X)^k_{ij} = s((b_X)^k_{ij}) \equiv$ number of growth line spacings intercepted by branch $(b_X)^k_{ij}$.

$$(G_X)^k_{ij} - (G_X)^k_{ij'}$$ where

$$j' = \begin{cases} j/2 \text{ for } j \text{ even} \\ j+1/2 \text{ for } j \text{ odd} \end{cases}$$

For a given insert rib IX(i)(j) (X = C, 1L, 1R, ...6L, 6R) occurring inside a primary rib on specimen k:

$(i_X)^k_{ij} \equiv$ point of origin of insert rib IX(i)(j)

$(G_{IX})^k_{ij} = G((i_X)^k_{ij}) \equiv$ number of the growth line at which $(i_X)^k_{ij}$ occurs

$(s_{IX})^k_{ij} = s((i_X)^k_{ij}) \equiv$ number of growth line spacings between $(i_X)^k_{ij}$ and $(n_X)^k_{ij}$.

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* the terms: branch, node, point of origin, element, primary rib, secondary rib, insert rib are defined on page 12. The notation used for these structures is defined on page 21.

$G^k_{tot} \equiv$ total number of growth lines on specimen k. (considering the commissure as the last growth line.

$L \equiv$ limit number. (number involved in the definition of the correlation coefficient such that, if a pair of corresponding growth line spacings differ by greater than L then an increment of 1 will be added for the pair to the denominator of the correlation coefficient and nothing will be added to the numerator of the correlation coefficient for the pair.)

For a set Q: N(Q) operator which gives the number of distinct elements in the set Q.

$P_1^{k\ell} \equiv$ Set of all pairs of corresponding branches $(b_X)^k_{ij}$ and $(b_X)^\ell_{ij}$ on specimens k and ℓ which are bounded both anteriorly and posteriorly by nodes.

$P_2^{k\ell} \equiv$ Set of all pairs of corresponding branches $(b_X)^k_{ij}$ and $(b_X)^\ell_{ij}$ on specimens k and ℓ for which one of the pair is bounded both anteriorly and posteriorly by nodes and the other is bounded by a node only at its posterior end, and for which the following is true:

$$(s_X)^k_{ij} \leq (s'_X)^\ell_{ij} - L \quad \text{where}$$

$$(s'_X)^\ell_{ij} = G^\ell_{tot} - (n_X)^\ell_{ij'}$$

$$j' = \begin{cases} j/2 \text{ if } j \text{ even} \\ j+1/2 \text{ if } j \text{ odd} \end{cases}$$

and where specimen k is considered to be the specimen bounded both anteriorly and posteriorly by nodes.

$P_T^{k\ell} \equiv P_1^{k\ell} + P_2^{k\ell}$

$I_1^{k\ell} \equiv$ Set of all pairs of corresponding insert rib points of origin $(i_X)^k_{ij}$ and $(i_X)^\ell_{ij}$ which are present on specimens k and ℓ.

$I_2^{k\ell} \equiv$ Set of all insert rib points of origin which occur within a primary rib of specimen k or ℓ for which there is no corresponding point of origin on the other specimen and for which the following is true: a) the node above the insert is present on both specimens, and b)

$$(s_{IX})^k_{ij} \leq (G^\ell_{tot} - (G_X)^\ell_{ij}) - L$$

where specimen k is considered to be the specimen on which the point of origin is present.

$I_T^{k\ell} \equiv I_1^{k\ell} + I_2^{k\ell}$

$N^{k\ell}$ ≡ total number of distinct elements on samples k and ℓ which are to be involved in the correlation.

As an example to illustrate the meaning of some of the above terms consider the shell shown in figure 4.

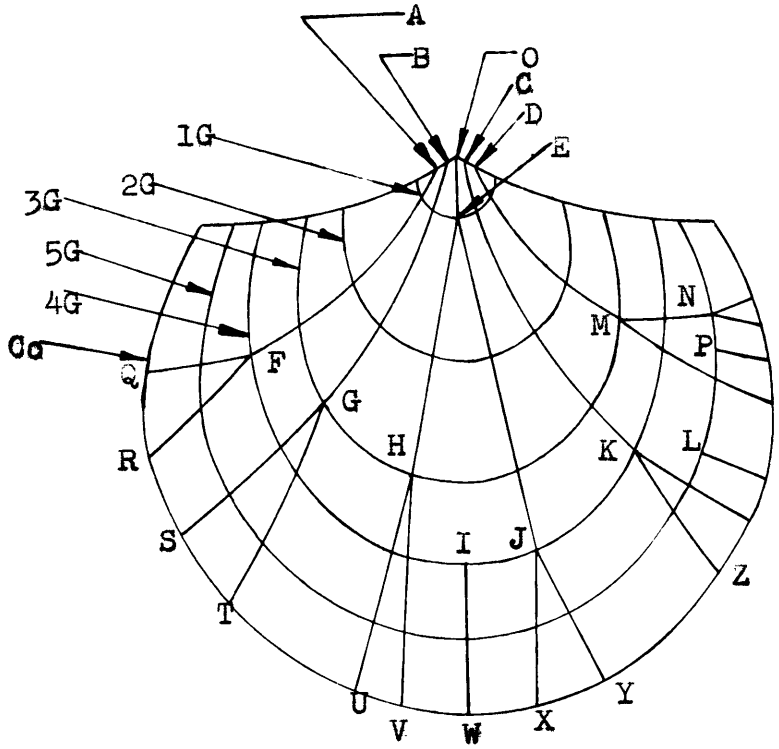


FIGURE 4

1G-5G are growth lines 1 to 5, and Co is the commissure. Points A,B,O,C, and D are the points of origin of primary ribs 2L,1L,C,1R, and 2R respectively. Point L is the point of origin of a secondary rib and points I and P are points of origin of insert ribs IC(1)(1) and I2R(1)(1) respectively. If we consider the specimen as being specimen #8, then points E,H,J,F,G,K,M, & N are nodes $(n_C)^8_{11}$, $(n_C)^8_{21}$, $(n_C)^8_{22}$, $(n_{2L})^8_{11}$, $(n_{1L})^8_{11}$, $(n_{1R})^8_{11}$, $(n_{2R})^8_{11}$, and $(n_{2R})^8_{22}$ respectively. Table 2 gives the designation and the value of the number of the growth line at which four of the above nodes occur. Branches OE,EH,EJ,HU,HV,JX,JY,EG,GS, & GT are branches $(b_C)^8_{11}$, $(b_C)^8_{21}$, $(b_C)^8_{22}$, $(b_C)^8_{31}$, $(b_C)^8_{32}$, $(b_C)^8_{33}$, $(b_C)^8_{34}$, $(b_{1L})^8_{11}$, $(b_{1L})^8_{21}$, and $(b_{1L})^8_{22}$ respectively. (branches on ribs 2L,1R, & 2R are not listed).

Figure 4-Continued

Table 3 gives the designation and the value of the number of growth line spacings intercepted by 4 of the above branches. The insert rib points of origin I and P are denoted by $(i_C)^8_{11}$ and $(i_{2R})^8_{11}$ respectively. $(G_{IC})^8_{11}$ is the number of the growth line at which $(I_C)^8_{11}$ occurs and is equal to 5. $(l_{IC})^8_{11}$ is the number of growth line spacings between $(i_C)^8_{11}$ and $(n_C)^8_{11}$ and is equal to 4. G^8_{tot} is 6.

TABLE 2.

node	designation of number of the growth line at which node occurs	number of the growth line at which node occurs
$(n_C)^8_{11}$	$(G_C)^8_{11}$	1
$(n_C)^8_{22}$	$(G_C)^8_{22}$	4
$(n_{1R})^8_{11}$	$(G_{1R})^8_{11}$	4
$(n_{2L})^8_{11}$	$(G_{2L})^8_{11}$	4

TABLE 3.

branch	designation of number of growth line spacings intercepted by branch	number of growth line spacings intercepted by branch
$(b_C)^8_{21}$	$(s_C)^8_{21}$	2
$(b_{1R})^8_{11}$	$(s_{1R})^8_{11}$	4
$(b_{1L})^8_{11}$	$(s_{1L})^8_{11}$	3
$(b_{21})^8_{22}$	$(s_{2L})^8_{22}$	2

Definition of the correlation coefficient. The correlation coefficient between two specimens k and ℓ is defined with respect to all the elements in the sets $P_T^{k\ell}$ and $I_T^{k\ell}$. Therefore $N^{k\ell} = N(P_T^{k\ell} + I_T^{k\ell})$. The correlation coefficient between k and ℓ is denoted by $C_{k\ell}$ and is defined as follows:

$$C_{k\ell} = \frac{\sum_{Xij \text{ in } P_1^{k\ell}} H_{Xij}^{k\ell} + \sum_{Xij \text{ in } I_1^{k\ell}} M_{Xij}^{k\ell}}{N^{k\ell}}$$

where

$$H_{Xij}^{k\ell} = \begin{cases} 1 - \dfrac{\left|(s_X)_{ij}^{k} - (s_X)_{ij}^{\ell}\right|}{L} & \text{for } \left|(s_X)_{ij}^{k} - (s_X)_{ij}^{\ell}\right| < L \\ 0 \quad \text{for } \left|(s_X)_{ij}^{k} - (s_X)_{ij}^{\ell}\right| \geq L \end{cases}$$

$$M_{Xij}^{k\ell} = \begin{cases} 1 - \dfrac{\left|(s_{IX})_{ij}^{k} - (s_{IX})_{ij}^{\ell}\right|}{L} & \text{for } \left|(s_{IX})_{ij}^{k} - (s_{IX})_{ij}^{\ell}\right| < L \\ 0 \quad \text{for } \left|(s_{IX})_{ij}^{k} - (s_{IX})_{ij}^{\ell}\right| \geq L \end{cases}$$

and as stated above:

$$N^{k\ell} = N(P_T^{k\ell} + I_T^{k\ell})$$

The first summation in the definition is to be taken over all X,i,j for which there is a corresponding pair of branches $(b_X)^k_{ij}$ and $(b_X)^\ell_{ij}$ in the set $P^{k\ell}_1$. The second summation is to be taken over all X,i,j for which there is a corresponding pair of points of origin $(i_X)^k_{ij}$ and $(i_X)^\ell_{ij}$ in the set $I^{k\ell}_1$.

It is apparent that, by definition, all correlation coefficients for which the patterns involved are identical equal 1, all correlation coefficients for which the patterns involved are markedly dissimilar equal 0, and that $0 \leq C_{k\ell} \leq 1$.

The correlation coefficient is defined as a function of 1) the number of growth line spacings intercepted by branches of primary ribs on the specimens and 2) the number of growth line spacings which occur between a) the points of origin of the insert ribs on the specimens which occur inside primary ribs, and b) the nodes above these insert ribs. Both types of data are very similar in that each consists of numbers which specify the growth line spacings between adjacent nodes or between nodes and adjacent points of origin. As there are many more branches of primary ribs than there are insert ribs within primary ribs, the value of the correlation coefficient is largely determined by the former.

The correlation coefficient is defined such that, if a given branch $(b_X)^k_{ij}$ on specimen k is bounded both anteriorly and posteriorly by nodes, and the corresponding branch $(b_X)^\ell_{ij}$ on specimen ℓ is bounded by a node only at its posterior end, then the branches may or may not be considered in the

computing of the correlation coefficient. Whether or not these elements are considered is determined by the following: If the minimum length which $(b_x)^{\ell}_{ij}$ could have had, if specimen ℓ had developed to a later stage of growth, is greater than or equal to $(s_x)^{k}_{ij} + L$, then the branches are considered as not correlating. An increment of 1 is added to the denominator of the correlation coefficient for these branches and nothing is added to the numerator of the correlation coefficient for these branches (as is done for pairs of branches both of which are bounded both anteriorly and posteriorly by nodes and whose growth line spacings differ by L or greater). This procedure is followed as, independent of where $(b_x)^{\ell}_{ij}$ would have terminated had growth progressed further, $(s_x)^{\ell}_{ij}$ would be equal to or greater than $(s_x)^{k}_{ij+L}$ and, in any instance where this is true, the branches involved are considered as not correlating. If the minimum length mentioned above is less than $(s_x)^{k}_{ij} + L$, then the branches are not considered in the computing of the correlation coefficients.

An identical procedure is followed for the case where the point of origin of an insert rib is present on one specimen but absent on another and the node above the insert rib is present on both specimens.

As an example of a computation of a correlation coefficient the specimens numbered 1 and 2 shown in figure 6 is sidered below and the correlation coefficient computed ' case L=2: P^{12}_{1} consists of the following pairs of bra

$(b_C)^1_{11}$ and $(b_C)^2_{11}$, $(b_C)^1_{21}$ and $(b_C)^2_{21}$, $(b_C)^1_{22}$, and $(b_C)^2_{22}$, $(b_{1R})^1_{11}$ and $(b_{1R})^2_{11}$, $(b_{1L})^1_{11}$ and $(b_{1L})^2_{11}$, $(b_{2L})^1_{11}$ and $(b_{2L})^2_{11}$.

P_2^{12} consists of the following pairs of branches $(b_C)^1_{34}$ and $(b_C)^2_{34}$, $(b_{2R})^1_{11}$ and $(b_{2R})^2_{11}$. I_1^{12} consists of the pair $(i_C)^1_{11}$ and $(i_C)^2_{11}$. I_2^{12} consists of $(i_{2L})^1_{11}$.

$$N^{12} = N(P_1^{12} + P_2^{12} + I_1^{12} + I_2^{12}) = 6 + 2 + 1 + 1 = 10$$

X,i,j for which there is a corresponding pair of branches in P_1^{12} are listed in table 4 and the values of H^{12}_{Xij} are given.

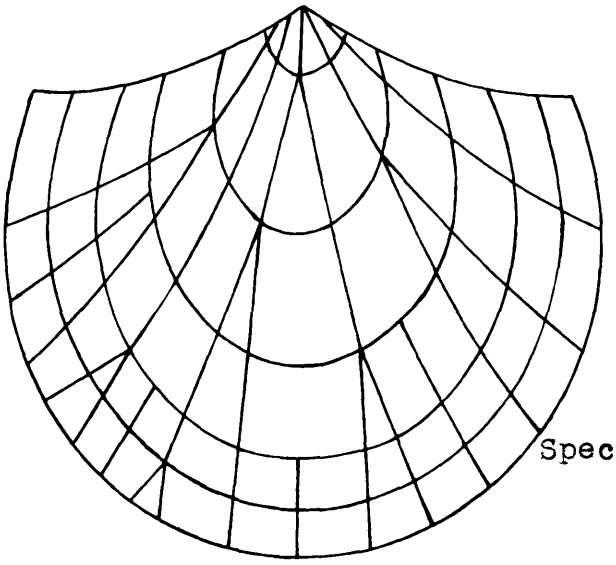
$$M^{12}_{C11} = 1/2.$$

$$C_{12} = \frac{\sum_{Xij \text{ in } P_1^{12}} H^{12}_{Xij} + \sum_{Xij \text{ in } I_1^{12}} M^{12}_{Xij}}{N^{12}}$$

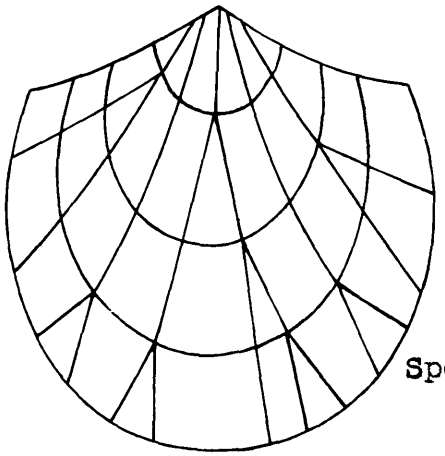
$$= \frac{(1+\frac{1}{2}+\frac{1}{2}+\frac{1}{2}+\frac{1}{2}+\frac{1}{2}) + (\frac{1}{2})}{10} = .4$$

Table 4.

X,i,j	H^{12}_{Xij}
C,1,1	1
C,2,1	$\frac{1}{2}$
C,2,2	$\frac{1}{2}$
1R,1,1	$\frac{1}{2}$
1L,1,1	$\frac{1}{2}$
2L,1,1	$\frac{1}{2}$



Specimen 1.



Specimen 2.

FIGURE 5.

Method of computing correlation coefficients. Correlation coefficients were computed by the M. I. T. I. B. M. 709 Digital Computer. For each of the horizons, data was introduced into the computer as a mXn matrix $[A_{kp}]$ where m is the total number of elements which were compared for each pair of specimens, and n is the total number of specimens which were compared. Each row of the matrix $[A_{kp}]$ consisted of the growth line spacings of a particular specimen which were to be compared, arranged in a specific sequence which was the same for all specimens of the horizon. Zeros were placed in the positions in the row corresponding to branches, and insert ribs and associated nodes, which were not present on the specimen. The growth line spacings intercepted by branches which do not have an adjacent node at their anterior end were introduced as negative numbers. The growth line spacings seperating nodes, which have no associated insert rib, from the anterior or lateral commissure were introduced as negative numbers in the positions in the row corresponding to the associated insert ribs. All other data was introduced as positive numbers.

The following input format was used for a specimen k from the Mulde, Hemse, or Eke horizons:

$(s_C)^k_{11}$	$(s_C)^k_{21}$	$(s_C)^k_{22}$	$(s_C)^k_{31}$
$(s_C)^k_{32}$	$(s_C)^k_{33}$	$(s_C)^k_{34}$	$(s_C)^k_{41}$
$(s_C)^k_{42}$	$(s_C)^k_{43}$	$(s_C)^k_{44}$	$(s_C)^k_{45}$
$(s_C)^k_{46}$	$(s_C)^k_{47}$	$(s_C)^k_{48}$	$(s_{IC})^k_{11}$
$(s_{IC})^k_{21}$	$(s_{IC})^k_{22}$	$(s_{IC})^k_{31}$	$(s_{IC})^k_{32}$
$(s_{IC})^k_{33}$	$(s_{IC})^k_{34}$	$(s_{IC})^k_{41}$	$(s_{IC})^k_{42}$
$(s_{IC})^k_{43}$	$(s_{IC})^k_{44}$	$(s_{IC})^k_{45}$	$(s_{IC})^k_{46}$
$(s_{IC})^k_{47}$	$(s_{IC})^k_{48}$	$(s_{1L})^k_{11}$	$(s_{1L})^k_{21}$

$(s_{1L})^k_{22}$ $(s_{1L})^k_{31}$ $(s_{1L})^k_{32}$ $(s_{1L})^k_{33}$
$(s_{1L})^k_{34}$ $(s_{2L})^k_{11}$ $(s_{2L})^k_{21}$ $(s_{2L})^k_{22}$
$(s_{2L})^k_{31}$ $(s_{2L})^k_{32}$ $(s_{2L})^k_{33}$ $(s_{2L})^k_{34}$
$(s_{3L})^k_{11}$ $(s_{3L})^k_{21}$ $(s_{3L})^k_{22}$ $(s_{3L})^k_{31}$
$(s_{3L})^k_{32}$ $(s_{3L})^k_{33}$ $(s_{3L})^k_{34}$ $(s_{1R})^k_{11}$
$(s_{1R})^k_{21}$ $(s_{1R})^k_{22}$ $(s_{1R})^k_{31}$ $(s_{1R})^k_{32}$
$(s_{1R})^k_{33}$ $(s_{1R})^k_{34}$ $(s_{2R})^k_{11}$ $(s_{2R})^k_{21}$
$(s_{2R})^k_{22}$ $(s_{2R})^k_{31}$ $(s_{2R})^k_{32}$ $(s_{2R})^k_{33}$
$(s_{2R})^k_{34}$ $(s_{3R})^k_{11}$ $(s_{3R})^k_{21}$ $(s_{3R})^k_{22}$
$(s_{3R})^k_{31}$ $(s_{3R})^k_{32}$ $(s_{3R})^k_{33}$ $(s_{3R})^k_{34}$

The following input format was used for a specimen k from the Upper Visby horizon:

$(s_C)^k_{11}$ $(s_C)^k_{21}$ $(s_C)^k_{22}$ $(s_C)^k_{31}$
$(s_C)^k_{32}$ $(s_C)^k_{33}$ $(s_C)^k_{34}$ $(s_C)^k_{41}$
$(s_C)^k_{42}$ $(s_C)^k_{43}$ $(s_C)^k_{44}$ $(s_C)^k_{45}$
$(s_C)^k_{46}$ $(s_C)^k_{47}$ $(s_C)^k_{48}$ $(s_C)^k_{51}$
$(s_C)^k_{52}$ $(s_C)^k_{53}$ $(s_C)^k_{54}$ $(s_C)^k_{55}$
$(s_C)^k_{56}$ $(s_C)^k_{57}$ $(s_C)^k_{58}$ $(s_C)^k_{59}$
$(s_C)^k_{510}$ $(s_C)^k_{511}$ $(s_C)^k_{512}$ $(s_C)^k_{513}$
$(s_C)^k_{514}$ $(s_C)^k_{515}$ $(s_C)^k_{516}$ $(s_{IC})^k_{11}$
$(s_{IC})^k_{21}$ $(s_{IC})^k_{22}$ $(s_{IC})^k_{31}$ $(s_{IC})^k_{32}$
$(s_{IC})^k_{33}$ $(s_{IC})^k_{34}$ $(s_{IC})^k_{41}$ $(s_{IC})^k_{42}$
$(s_{IC})^k_{43}$ $(s_{IC})^k_{44}$ $(s_{IC})^k_{45}$ $(s_{IC})^k_{46}$
$(s_{IC})^k_{47}$ $(s_{IC})^k_{48}$ $(s_{1L})^k_{11}$ $(s_{1L})^k_{21}$
$(s_{1L})^k_{22}$ $(s_{1L})^k_{31}$ $(s_{1L})^k_{32}$ $(s_{1L})^k_{33}$
$(s_{1L})^k_{34}$ $(s_{2L})^k_{11}$ $(s_{2L})^k_{21}$ $(s_{2L})^k_{22}$
$(s_{2L})^k_{31}$ $(s_{2L})^k_{32}$ $(s_{2L})^k_{33}$ $(s_{2L})^k_{34}$

$$
\begin{array}{cccc}
(s_{3L})^k_{11} & (s_{3L})^k_{21} & (s_{3L})^k_{22} & (s_{3L})^k_{31} \\
(s_{3L})^k_{32} & (s_{3L})^k_{33} & (s_{3L})^k_{34} & (s_{4L})^k_{11} \\
(s_{4L})_{21} & (s_{4L})_{22} & (s_{4L})^k_{31} & (s_{4L})^k_{32} \\
(s_{4L})_{33} & (s_{4L})_{34} & (s_{1R})_{11} & (s_{1R})_{21} \\
(s_{1R})^k_{22} & (s_{1R})^k_{31} & (s_{1R})^k_{32} & (s_{1R})^k_{33} \\
(s_{1R})^k_{34} & (s_{2R})^k_{11} & (s_{2R})^k_{21} & (s_{2R})^k_{22} \\
(s_{2R})^k_{31} & (s_{2R})^k_{32} & (s_{2R})^k_{33} & (s_{2R})^k_{34} \\
(s_{3R})^k_{11} & (s_{3R})^k_{21} & (s_{3R})^k_{22} & (s_{3R})^k_{31} \\
(s_{3R})^k_{32} & (s_{3R})^k_{33} & (s_{3R})^k_{34} & (s_{4R})^k_{11} \\
(s_{4R})^k_{21} & (s_{4R})^k_{22} & (s_{4R})^k_{31} & (s_{4R})^k_{32} \\
(s_{4R})^k_{33} & (s_{4R})^k_{34} & 0 & 0
\end{array}
$$

The following Fortran program was employed for each of the 4 horizons with proper values substituted for m and n:

Program used for computing correlation coefficients comparing m elements for n specimens for the case L=4:

```
*       XEQ

C       HARPER, CHARLES WOODS,M1263
        WRITE OUTPUT TAPE 2,5
        FORMAT(13H HARPER M1263)
        DIMENSION A(n,m),C(n,n)
        READ INPUT TAPE 4,10,((A(I,J),I=1,m),J=1,n)
 10     FORMAT(4E18.8)
        DO 140 J=1,n-1
        KO=J+1
        DO 130 K KO,n
        DEN=0.EO
        ONUM=0.EO
        DO 100 L 1,m
        IF(A(L,J))65,100,20
 20     IF(A(L,K))70,100,30
 30     IF(ABSF(A(L,K)-A(L,J))-4.EO)50,50,75
 50     ONUM=ONUM+(1.EO-(ABSF(A(L,K)-A(L,J)))/4.EO)
        GO TO 75
 65     IF(A(L,K))100,100,70
 70     IF(A(L,J)+A(L,K)+4.EO)75,75,100
 75     DEN=DEN+1.EO
 100    CONTINUE
        IF(DEN)200,110,120
 110    C(J,K)=1.EO
        GO TO 130
 120    C(J,K)=ONUM/DEN
 130    CONTINUE
 140    CONTINUE
        DO 150 J=1,n-1
        JA=J+1
        WRITE OUTPUT TAPE 2,10,(C( ,K),K=JA,n)
 150    CONTINUE
 200    CALL EXIT
        END
        DATA
```

The above program is for correlation coefficients computed with L=4. A program identical to the above except that 4 is replaced by 3 in statements 30,50, and 70 was used for correlation coefficients, computed for the case L=3, for

all 4 horizons.

Some correlation coefficients were computed by hand, and the results were compared with the corresponding results produced by the computer. These were found to be the same as the latter.

Elements which were compared. In the analyses of the specimens from the Mulde, Hemse and Eke horizon the following elements were compared: C(1)(1), C(2)(1), C(2)(2), C(3)(1), C(3)(2), C(3)(3), C(3)(4), C(4)(1), C(4)(2), C(4)(3), C(4)(4), C(4)(5), C(4)(6), C(4)(7), C(4)(8), IC(1)(1), IC(2)(1), IC(2)(2), IC(3)(1), IC(3)(2), IC(3)(3), IC(3)(4), IC(4)(1), IC(4)(2), IC(4)(3), IC(4)(4), IC(4)(5), IC(4)(6), IC(4)(7), IC(4)(8), 1L(1)(1), 1L(2)(1), 1L(2)(2), 1L(3)(1), 1L(3)(2), 1L(3)(3), 1L(3)(4), 2L(1)(1), 2L(2)(1), 2L(2)(2), 2L(3)(1), 2L(3)(2), 2L(3)(3), 2L(3)(4), 3L(1)(1), 3L(2)(1), 3L(2)(2), 3L(3)(1), 3L(3)(2), 3L(3)(3), 3L(3)(4), 1R(1)(1), 1R(2)(1), 1R(2)(2), 1R(3)(1), 1R(3)(2), 1R(3)(3), 1R(3)(4), 2R(1)(1), 2R(2)(1), 2R(2)(2), 2R(3)(1), 2R(3)(2), 2R(3)(3), 2R(3)(4), 3R(1)(1), 3R(2)(1), 3R(2)(2), 3R(3)(1), 3R(3)(2), 3R(3)(3), 3R(3)(4).

Primary ribs lateral to 3L and 3R were not considered as the patterns of these ribs were obscure in most cases. Insert ribs occurring inside lateral primary ribs were

not considered as they occurred only infrequently in the specimens.

In the analysis of the specimens from the Upper Visby horizon all of the above elements considered for the other horizons were compared. In addition the following elements were compared: C(5)(1), C(5)(2), C(5)(3), C(5)(4), C(5)(5), C(5)(6), C(5)(7), C(5)(8), C(5)(9), C(5)(10), C(5)(11), C(5)(12), C(5)(13), C(5)(14), C(5)(15), C(5)(16), 4L(1)(1), 4L(2)(1), 4L(2)(2), 4L(3)(1), 4L(3)(2), 4L(3)(3), 4L(3)(4), 4R(1)(1), 4R(2)(1), 4R(2)( ), 4R(3)(1), 4R(3)(2), 4R(3)(3), 4R(3)(4). Fifth order branches for the central primary rib were considered as the order of branching present is on the average higher for one of the 2 groups of Upper Visby specimens than for the rest of the specimens in the collection. Primary ribs 4L and 4R were compared as these ribs are not obscure in many cases in the Upper Visby collection.

Secondary ribs. In the definition of the correlation coefficient secondary ribs were not considered because, on the basis of what is known about the branching pattern, it is not possible to conclude what the homologies between the secondary ribs of different specimens are. For a discussion of the homologies of secondary ribs see Appendix II.

RESULTS OF THE ANALYSIS OF THE RIB BRANCHING PATTERNS:

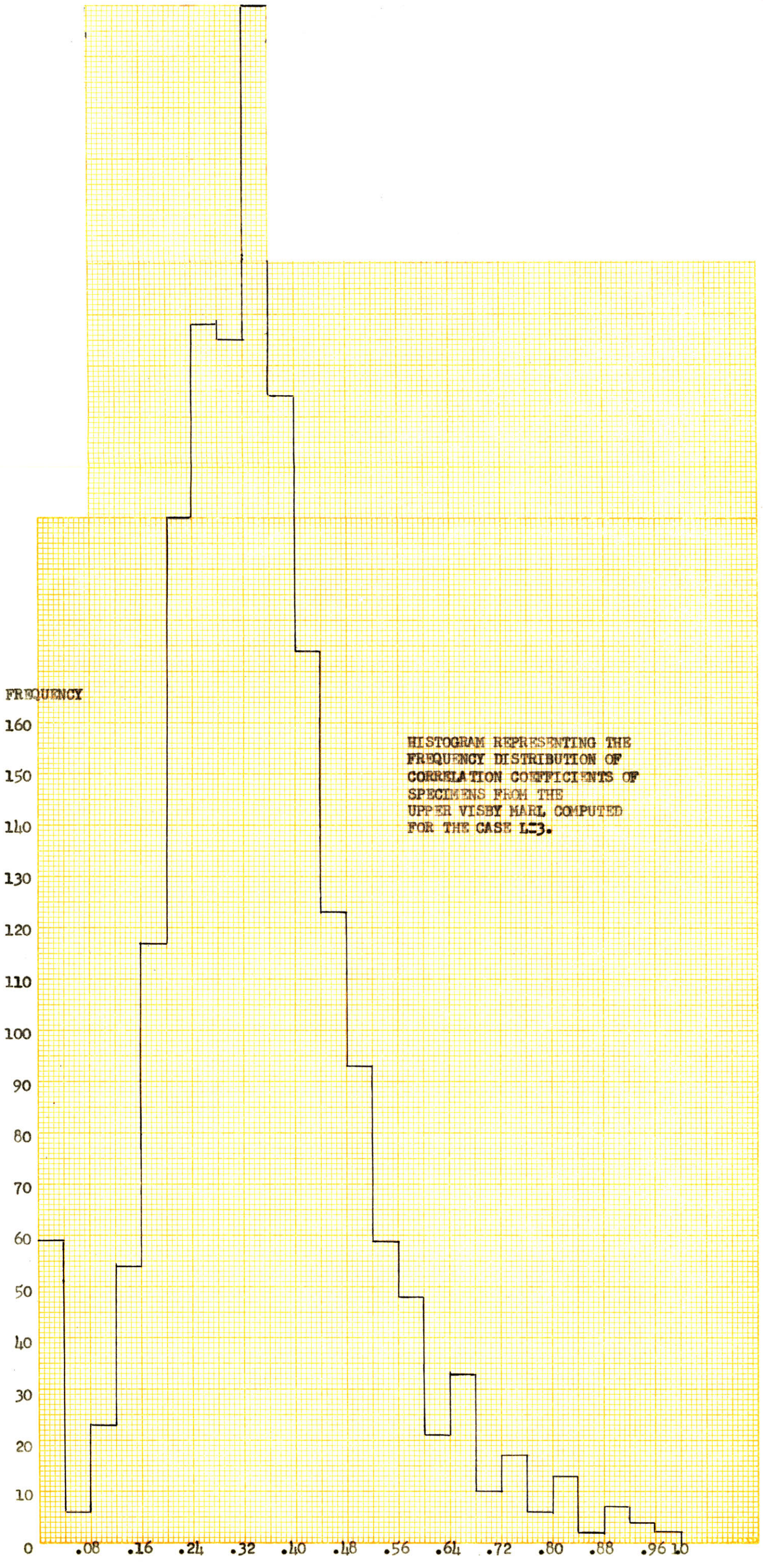
The tables and graphs in this section constitute the results which are the outcome of the analysis of the rib branching patterns described in the previous section.

In this section, the first group of specimens from the Upper Visby marl described on page 18 is referred to as group A, and the second group of specimens described are referred to as group B.

Table 5.

Distribution of correlation coefficients of specimens from the Upper Visby marl computed for the case L=3:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	59	.800-.839	13
.404-.079	6	.840-.879	2
.080-.119	23	.880-.919	7
.120-.159	54	.920-.959	4
.160-.199	117	.960-.999	2
.200-.239	200		
.240-.279	238		
.280-.319	235		
.320-.359	300		
.360-.399	224		
.400-.439	1 4		
.440-.479	123		
.480-.519	93		
.520-.559	5		
.560-.563	48		
.600-.639	21		
.040-.679	33		
.680-.719	10		
.720-.759	17		
.760-.799	11		

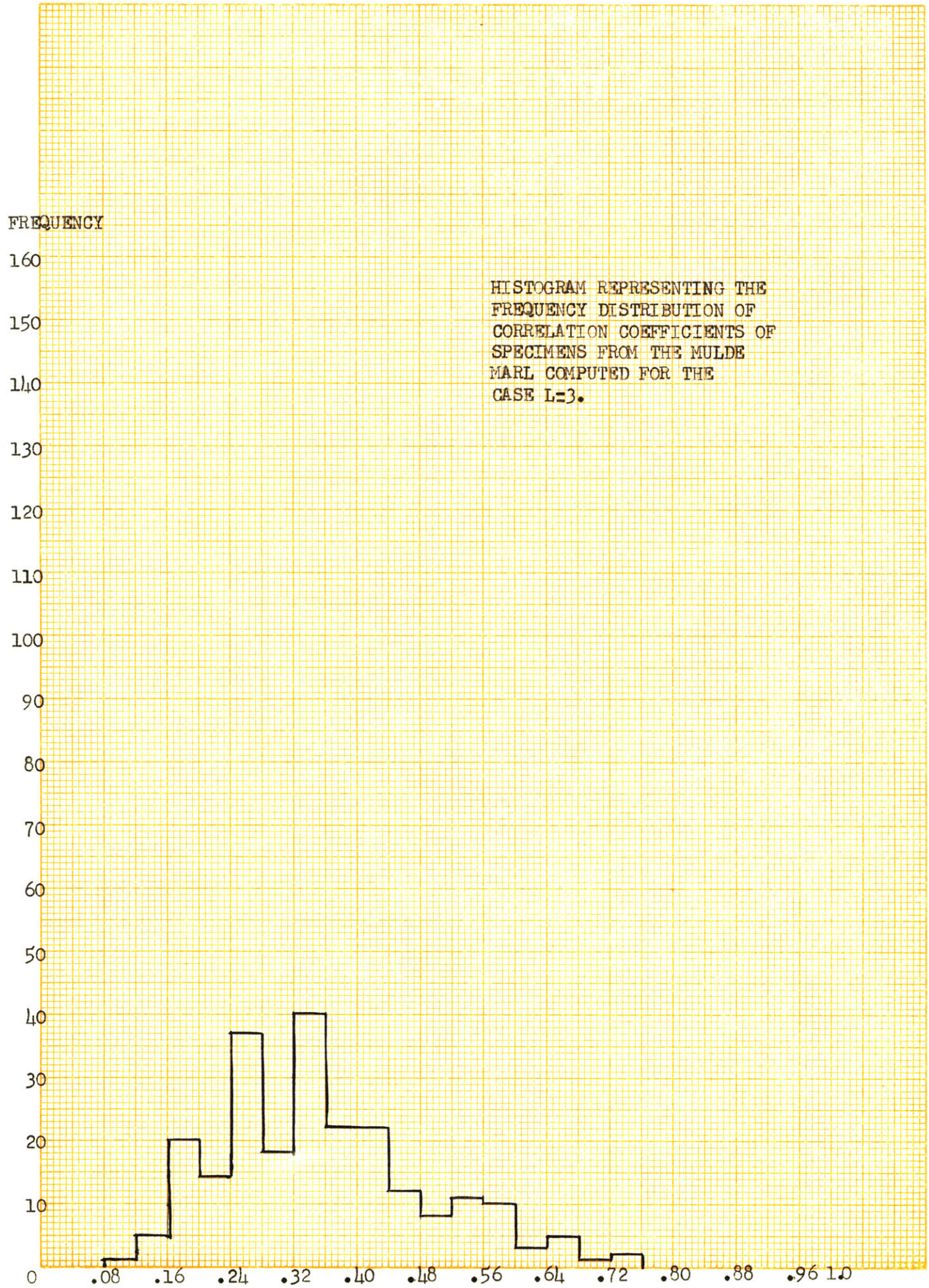


HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE UPPER VISBY MARL COMPUTED FOR THE CASE L=3.

Table 6.

Distribution of correlation coefficients of specimens from the Mulde marl computed for the case L=3:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	0
.040-.079	0	.840-.879	0
.080-.119	1	.880-.919	0
.120-.159	5	.920-.959	0
.160-.199	20	.960-.999	0
.200-.239	14		
.240-.279	37		
.280-.319	18		
.320-.359	40		
.360-.399	22		
.400-.439	22		
.440-.479	12		
.480-.519	3		
.520-.559	11		
.560-.563	10		
.600-.639	3		
.640-.679	5		
.680-.719	1		
.720-.759	2		
.760-.799	0		



HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE MULDE MARL COMPUTED FOR THE CASE L=3.

Table 7

Distribution of correlation coefficients of specimens from the Hemse group computed for the case L=3:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	0
.040-.079	0	.840-.879	0
.080-.119	0	.880-.919	0
.120-.159	2	.920-.959	0
.160-.199	4	.960-.999	0
.200-.239	8		
.240-.279	20		
.280-.319	22		
.320-.359	25		
.360-.399	34		
.400-.439	39		
.440-.479	30		
.480-.519	32		
.520-.559	22		
.560-.563	19		
.600-.639	6		
.640-.679	8		
.680-.719	4		
.720-.759	1		
.760-.799	0		

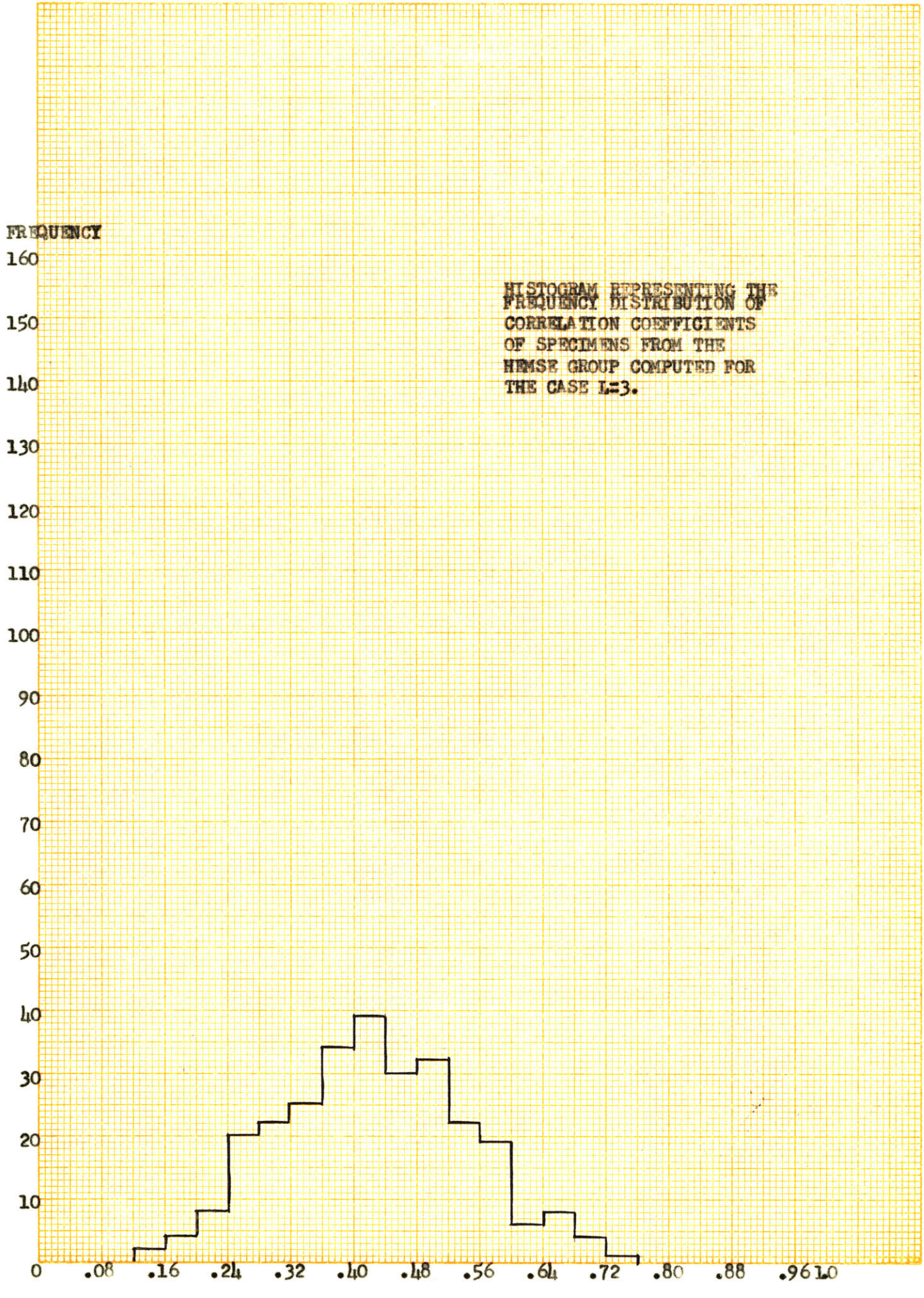
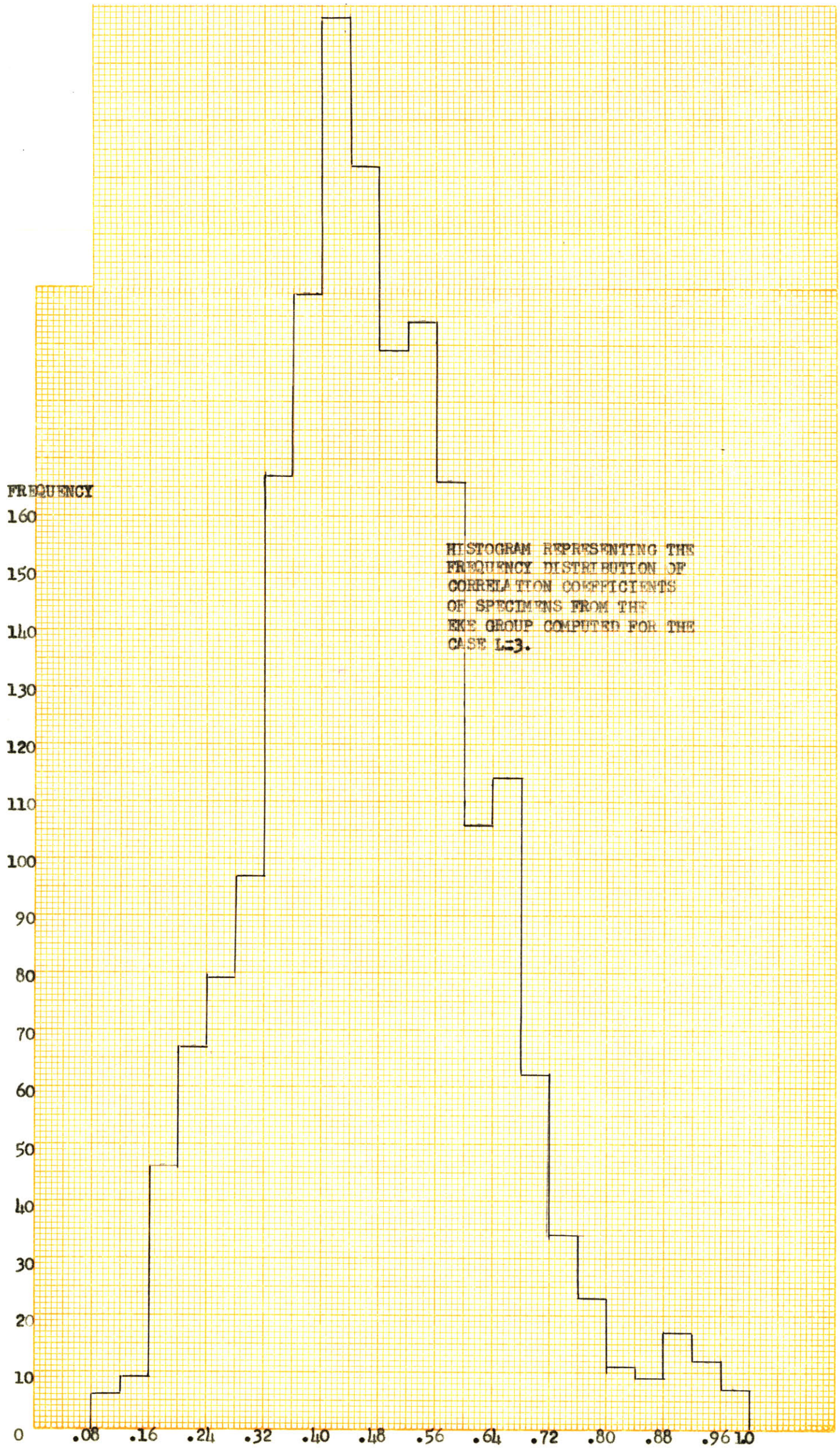

FREQUENCY
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
.08
.16
.24
.32
.40
.48
.56
.64
.72
.80
.88
.96
1.0
HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE HEMSE GROUP COMPUTED FOR THE CASE L=3.

Table 8.

Distribution of correlation coefficients of specimens from the Eke group computed for the case L=3:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	11
.040-.079	0	.840-.879	9
.080-.119	6	.880-.919	16
.120-.159	9	.920-.959	12
.160-.199	46	.960-.999	7
.200-.239	67		
.240-.279	79		
.280-.319	97		
.320-.359	167		
.360-.399	199		
.400-.439	246		
.440-.479	221		
.480-.519	139		
.520-.559	194		
.560-.563	166		
.600-.639	106		
.640-.679	114		
.680-.719	62		
.720-.759	34		
.760-.799	23		

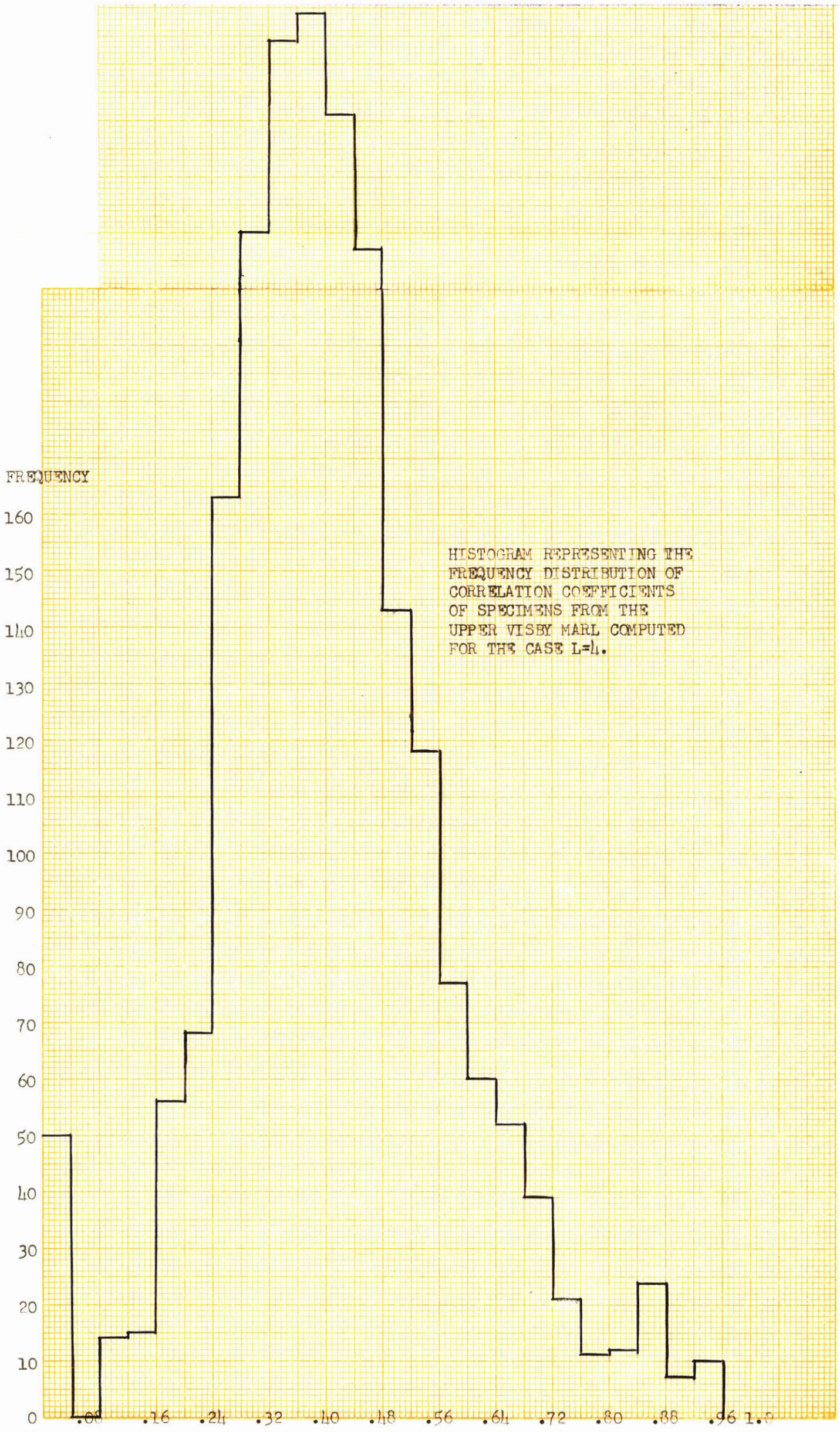


HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE EKE GROUP COMPUTED FOR THE CASE L=3.

Table 9.

Distribution of correlation coefficients of specimens from the Upper Visby marl computed for the case I=4:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	50	.800-.839	12
.040-.079	0	.840-.879	24
.080-.119	14	.880-.919	7
.120-.159	15	.920-.959	10
.160-.199	56	.960-.999	0
.200-.239	68		
.240-.279	163		
.280-.319	210		
.320-.359	244		
.360-.399	248		
.400-.439	231		
.440-.479	207		
.480-.519	143		
.520-.559	118		
.560-.563	77		
.600-.639	60		
.640-.679	52		
.680-.719	39		
.720-.759	21		
.760-.799	11		



HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE UPPER VISBY MARL COMPUTED FOR THE CASE L=4.

Table 10

Distribution of correlation coefficients of specimens of group A from the Upper Visby marl computed for the case L=4:

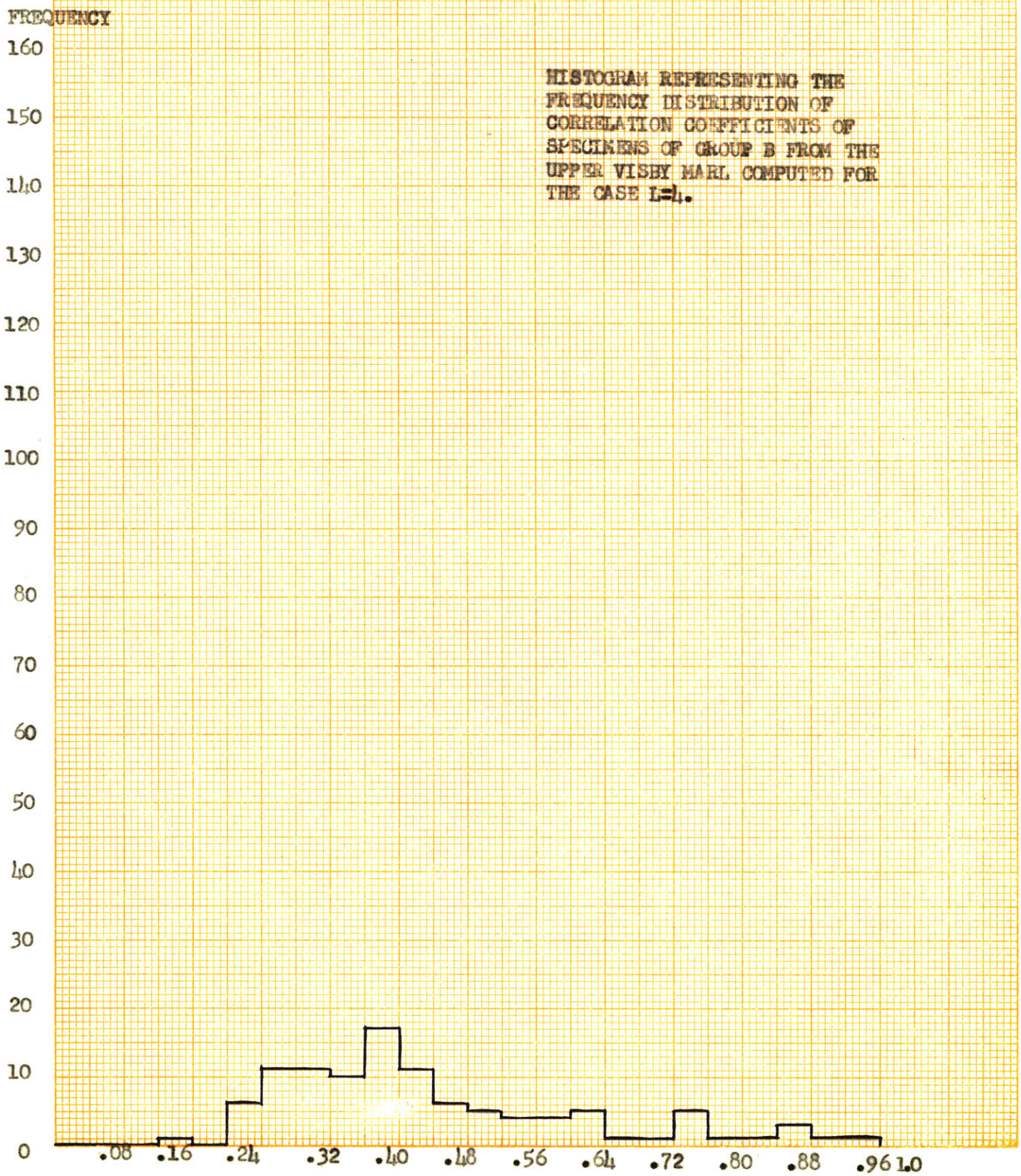
Class Interval	Frequency	Class Interval	Frequency
.000-.039	40	.800-.839	4
.040-.079	0	.840-.879	10
.080-.119	12	.880-.919	5
.120-.159	5	.920-.959	3
.160-.199	24	.960-.999	0
.200-.239	38		
.240-.279	93		
.280-.319	133		
.320-.359	150		
.360-.399	141		
.400-.439	138		
.440-.479	133		
.480-.519	92		
.520-.559	64		
.560-.563	44		
.600-.639	30		
.640-.679	35		
.680-.719	18		
.720-.759	8		
.760-.799	5		

HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS OF GROUP A FROM THE UPPER VISBY MARL COMPUTED FOR THE CASE L=4.

Table 11.

Distribution of correlation coefficients of specimens of group B from the Upper Visby marl computed for the case L=4:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	1
.040-.079	0	.840-.879	3
.080-.119	0	.880-.919	1
.120-.159	1	.920-.959	1
.160-.199	0	.960-.999	0
.200-.239	6		
.240-.279	11		
.280-.319	11		
.320-.359	10		
.360-.399	17		
.400-.439	11		
.440-.479	6		
.480-.519	5		
.520-.559	4		
.560-.563	4		
.600-.639	5		
.640-.679	1		
.680-.719	1		
.720-.759	5		
.760-.799	1		



HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS OF GROUP B FROM THE UPPER VISBY MARL COMPUTED FOR THE CASE L=4.

Table 12.

Distribution of correlation coefficients between pairs of specimens from the Upper Visby marl for which one of the pair is from group A and the other is from group B, computed for the case L=4:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	10	.800-.839	7
.040-.079	0	.840-.879	11
.080-.119	2	.880-.919	1
.120-.159	9	.920-.959	6
.160-.199	32	.960-.999	0
.200-.239	24		
.240-.279	59		
.280-.319	66		
.320-.359	84		
.360-.399	90		
.400-.439	82		
.440-.479	68		
.480-.519	46		
.520-.559	50		
.560-.563	29		
.600-.639	25		
.640-.679	16		
.680-.719	20		
.720-.759	8		
.760-.799	5		

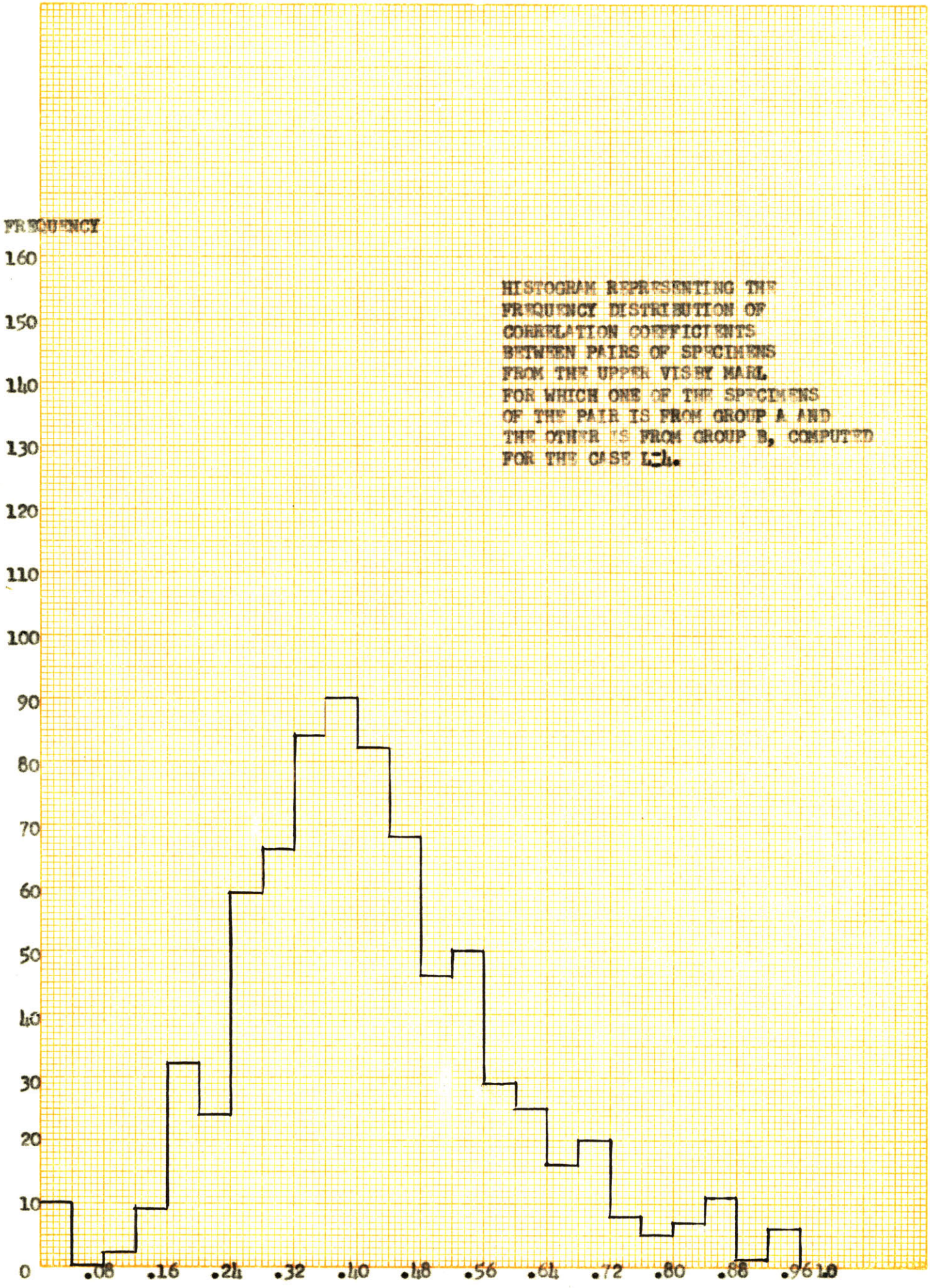
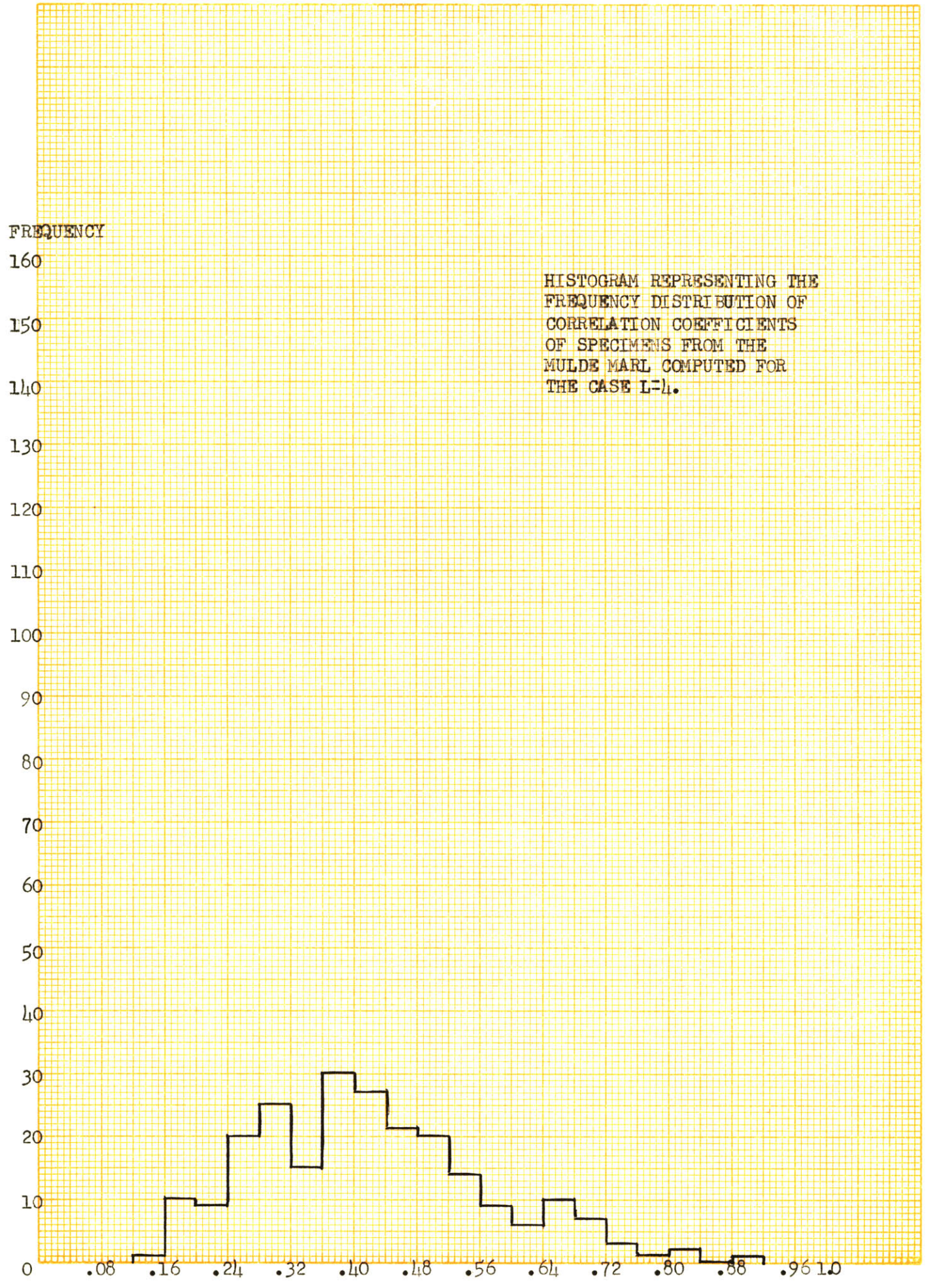


Table 13.

Distribution of correlation coefficients of specimens from the Mulde marl computed for the case L=4:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	2
.040-.079	0	.840-.879	0
.080-.119	0	.880-.919	1
.120-.159	1	.920-.959	0
.160-.199	10	.960-.999	0
.200-.239	9		
.240-.279	20		
.280-.319	25		
.320-.359	16		
.360-.399	30		
.400-.439	27		
.440-.479	21		
.480-.519	20		
.520-.559	14		
.560-.563	9		
.600-.639	5		
.640-.679	10		
.680-.719	7		
.720-.759	3		
.760-.799	1		

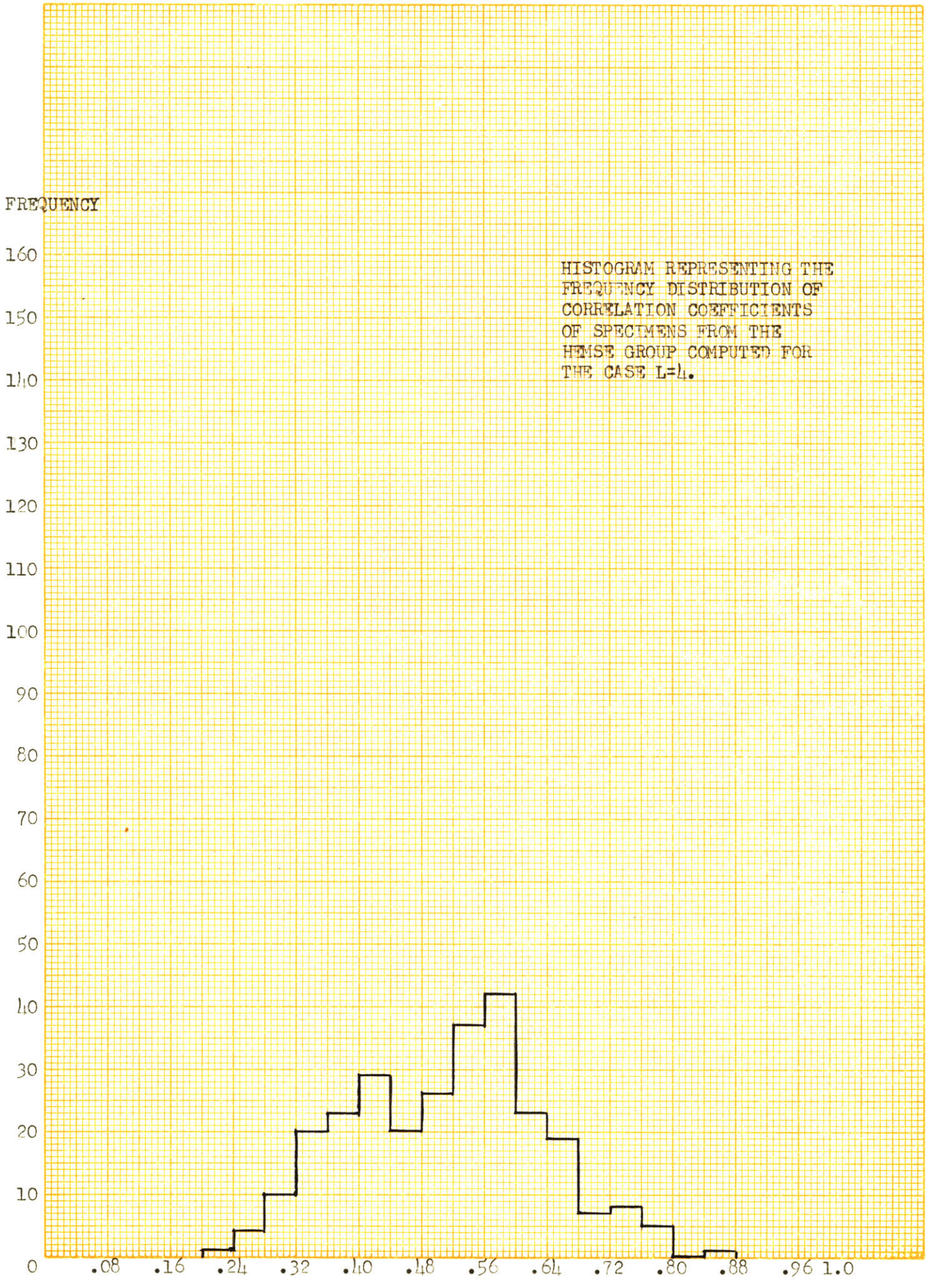


HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE MULDE MARL COMPUTED FOR THE CASE L=4.

Table 14.

Distribution of correlation coefficients of specimens from the Hemse group computed for the case L=4:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	0
.040-.079	0	.840-.879	1
.080-.119	0	.880-.919	0
.120-.159	0	.920-.959	0
.160-.199	0	.960-.999	0
.200-.239	1		
.240-.279	4		
.280-.319	10		
.320-.359	20		
.360-.399	23		
.400-.439	29		
.440-.479	20		
.480-.519	26		
.520-.559	37		
.560-.563	42		
.600-.639	24		
.640-.679	19		
.680-.719	7		
.720-.759	8		
.760-.799	5		

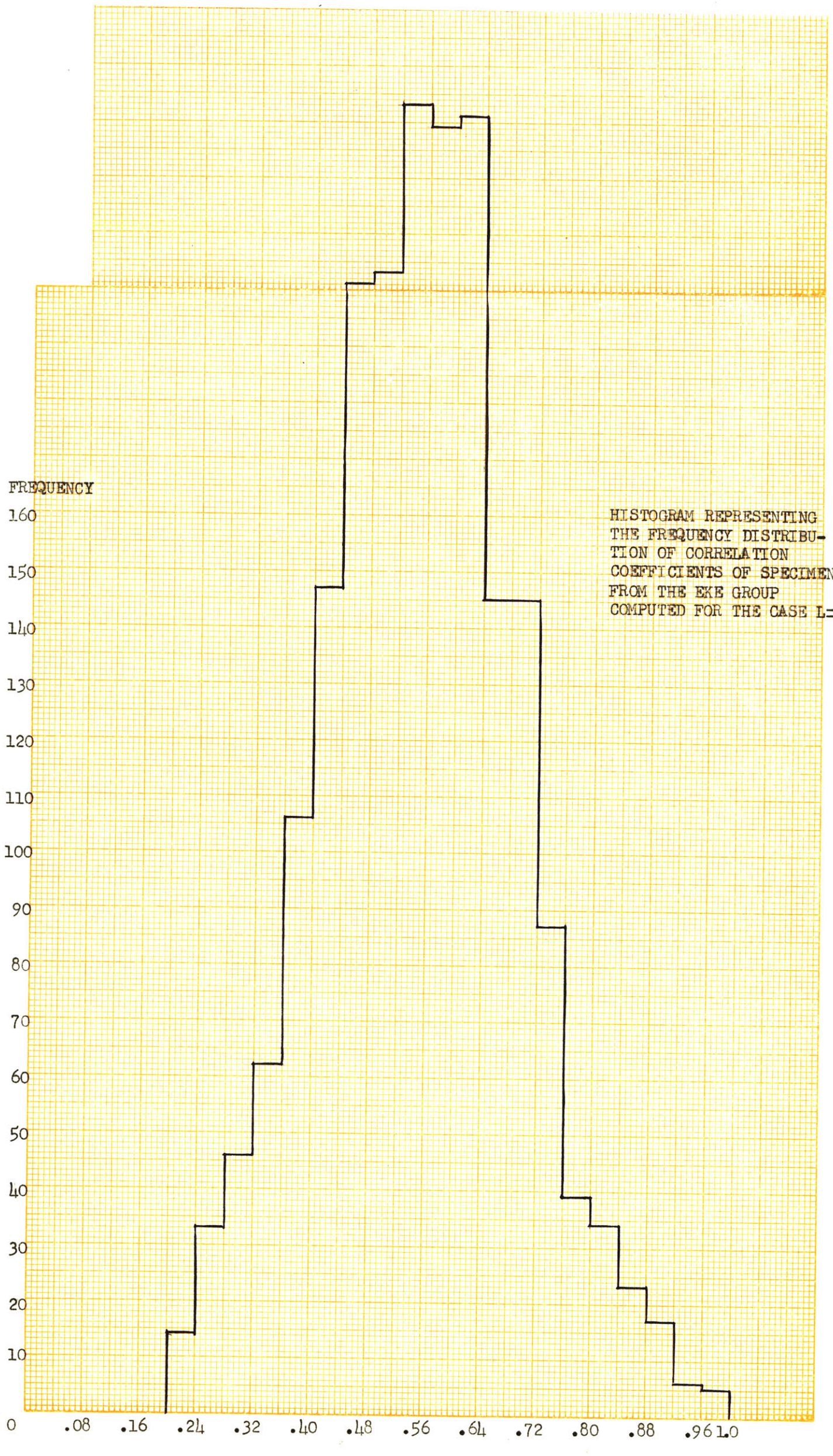


HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE HEMSE GROUP COMPUTED FOR THE CASE L=4.

Table 15

Distribution of correlation coefficients of specimens from the Ike group computed for the case L=4:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	0	.800-.839	34
.040-.079	0	.840-.879	23
.080-.119	0	.880-.919	17
.120-.159	0	.920-.959	6
.160-.199	10	.960-.999	5
.200-.239	14		
.240-.279	33		
.280-.319	46		
.320-.359	62		
.360-.399	106		
.400-.439	147		
.440-.479	201		
.480-.519	203		
.520-.559	233		
.560-.563	229		
.600-.639	231		
.640-.679	148		
.680-.719	145		
.720-.759	87		
.760-.799	39		

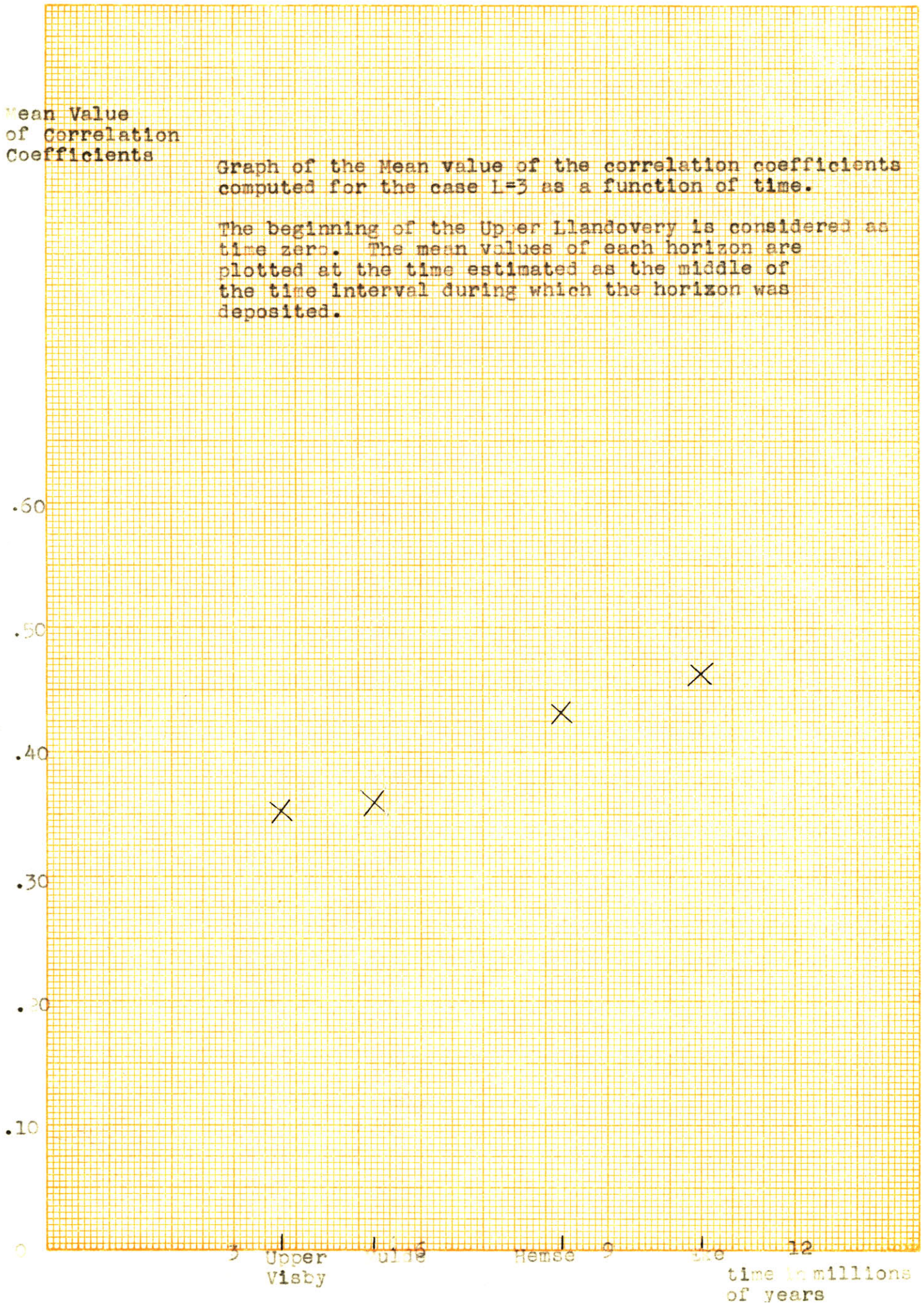


HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF SPECIMENS FROM THE EKE GROUP COMPUTED FOR THE CASE L=4.

Table 16.

Mean value of the correlation coefficients computed for the case L=3.

Horizon	Mean Value of Correlation Coefficients
Eke Group	.464
Hemse group	.432
Mulde marl	.359
Upper Visby marl	.353



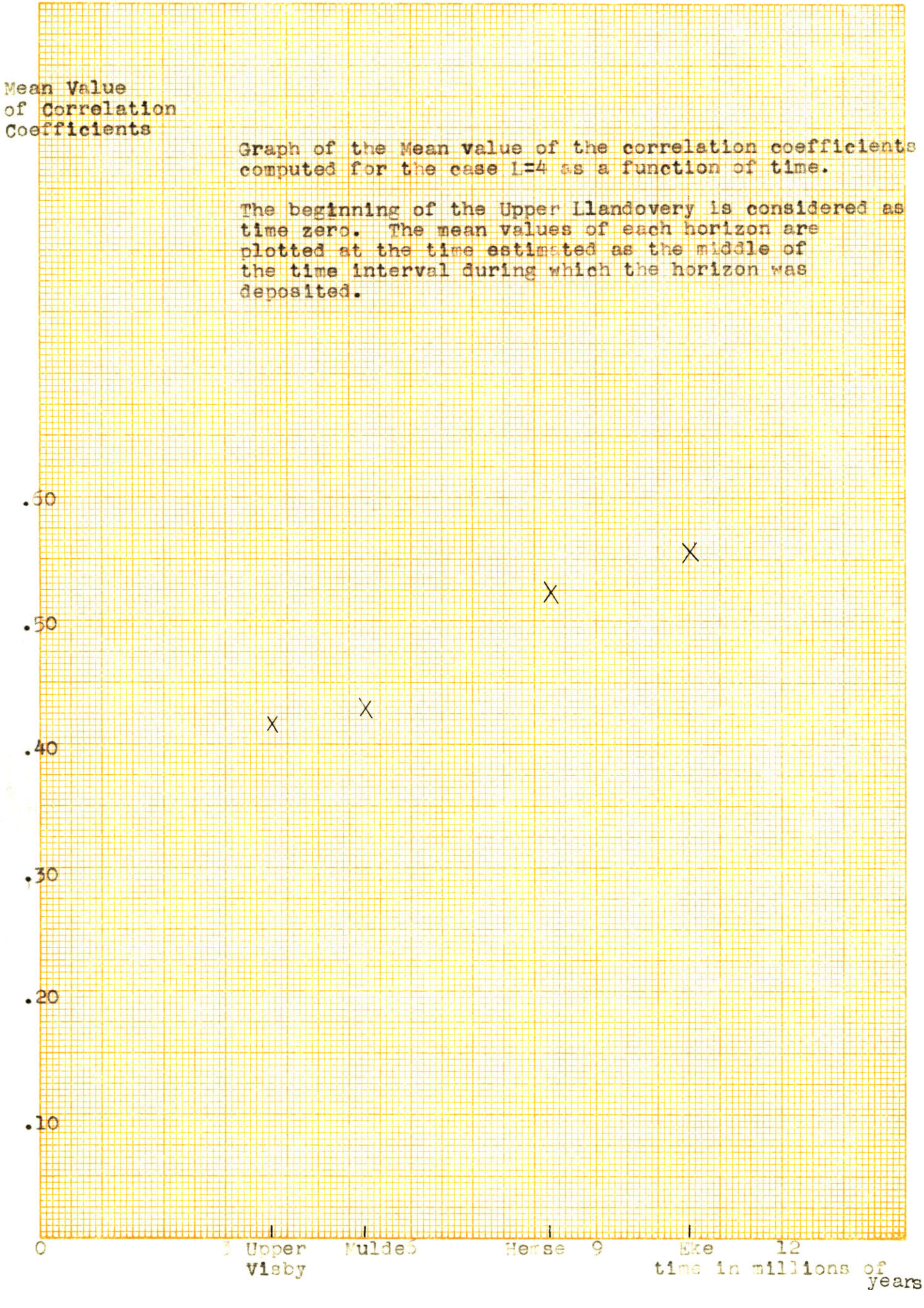
Graph of the Mean value of the correlation coefficients computed for the case L=3 as a function of time.

The beginning of the Upper Llandovery is considered as time zero. The mean values of each horizon are plotted at the time estimated as the middle of the time interval during which the horizon was deposited.

Table 17

Mean value of the correlation coefficients computed for the case L=4.

Horizon	Mean Value of Correlation Coefficients
Ekе group	.556
Hemse group	.523
Mulde marl	.430
Upper Visby marl	.417



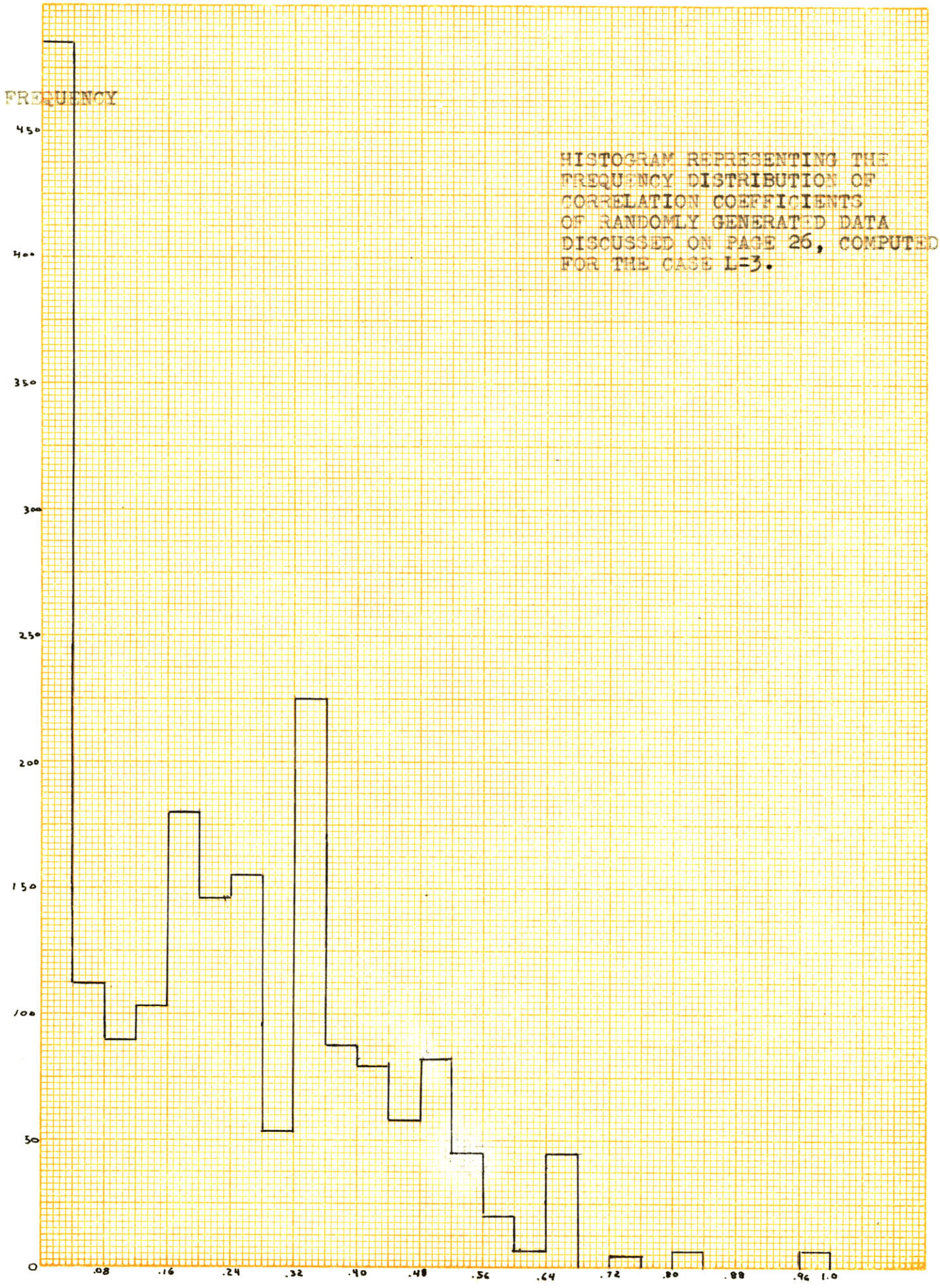
Graph of the Mean value of the correlation coefficients computed for the case L=4 as a function of time.

The beginning of the Upper Llandovery is considered as time zero. The mean values of each horizon are plotted at the time estimated as the middle of the time interval during which the horizon was deposited.

Table 18.

Distribution of correlation coefficients of randomly generated data discussed on page 26, computed for the case L=3:

Class Interval	Frequency	Class Interval	Frequency
.000-.039	485	.800-.839	11
.040-.079	112	.840-.879	0
.080-.119	89	.880-.919	2
.120-.159	106	.920-.959	0
.160-.199	180	.960-.999	12
.200-.239	146		
.240-.279	159		
.280-.319	53		
.320-.359	224		
.360-.399	88		
.400-.439	79		
.440-.479	58		
.480-.519	82		
.520-.559	43		
.560-.599	21		
.600-.639	11		
.640-.679	45		
.680-.719	1		
.720-.759	7		
.760-.799	2		



HISTOGRAM REPRESENTING THE FREQUENCY DISTRIBUTION OF CORRELATION COEFFICIENTS OF RANDOMLY GENERATED DATA DISCUSSED ON PAGE 26, COMPUTED FOR THE CASE L=3.

CONCLUSIONS:

No definite modality is evident in the frequency distributions of correlation coefficients from any of the four horizons considered. (See tables 3-15 and graphs 5-15). Therefore, it is not possible to subdivide the group of specimens from any of the horizons into distinct subgroups on the basis of the results obtained. We may conclude that either 1) distinct subgroupings are not present in the horizons or 2) distinct subgroupings are present but they are of a nature such that they are not resolvable by the methods used. With regard to the latter, it may be noted that the methods used to test for the presence of subgroups compare the branching patterns of the primary and insert ribs as a whole, and do not necessarily resolve subgroupings which may be made on the basis of a particular part of the pattern such as, for example, the median primary rib.

The distribution of correlation coefficients from the Upper Visby horizon for groups A, and B, and between pairs of specimens for which one is from group A and the other is from group B, are indistinguishable from each other and from the distribution of correlation coefficient for the specimens of the Upper Visby horizon as a whole. (See tables 9-12 and graphs 9-12). We may conclude from this that 1) the degree of homogeneity exhibited by the specimens from the Upper Visby horizon considered as a whole is the same as that of each of the constituent groups considered separately, and 2) the methods employed did not resolve the relatively minor differences in the branching patterns of groups A and B described on page 18 .

The frequency distribution of correlation coefficients for the four horizons shift slightly to the right as a function of time, for both the case L=3 and L=4. (See tables 5-15 and graphs 5-15). The mean value of the correlation coefficients increases with time for both the case L=3 and L=4. (tables 16&17 and graphs 16&17). Both of the above results are consistent with an overall trend of an increase in the degree of homogeneity present as a function of time.

For each horizon, the great majority of the correlation coefficients lie between .25 and .75. We may conclude, from the fact that the majority of the correlation coefficients are less than .75, that the branching patterns exhibit a definite amount of variation from one specimen to another. We may conclude, from the fact that the majority of correlation coefficients are greater than .25, that there is, nonetheless, an underlying similarity in the branching patterns from one specimen to another.

The correlation coefficients of the random data are distributed much more discontinuously and irregularly than the correlation coefficients for the specimens studied. Thus, any conclusions made from the results of the distribution of correlation coefficients may not be invalidated on the basis that similar results were obtained from random data. (Table & Graph 18)

Appendix I

The following is a list of fossil localities from which the fossils considered in this report were obtained:

56-G-17 Mulde brickyard, Mulde marl, Klintehamn quadrangle.

56-G-23 Mastermyr canal, east of Sprage-Hablingbo road; Hemse skiffer, Hemse quadrangle.

56-G-25 Lau canal, Hemse marl just south of the Eke Outcrop, Ronehamn quadrangle.

56-G-26 One-half way between Adgvide and Haffride, Hemse marl, south on N-side of road, Ronehamn quadrangle.

56-G-33 Quarry of cement plant in slide. Slite marl, Slite quadrangle.

56-G-34 Shore on point between Gustavsvik and snackgardsbadeu, N of Visby; L. Visby marl, Visby quadrangle.

56-G-37 Eke group (youngest part) about 500 m. S.W. of Ronehamn Harbor, in ditch (just below contact with Burgsvik sandstone; Ronehamn quadrangle.

56-G-38 Laubacker, Eke marl, Ronehamn quadrangle. Lau Parish.

56-G-47 Shore at Gnisvarda flge., Upper Visby marl, Tofta Parish, Klimtehamn quadrangle.

56-G-50 E. side of Kopparsviksgaton and Gutevagen, Visby, where these streets intersect. Basal beds of Hogklint group, Visby quadrangle.

Appendix I (continued)

56-G-51 Just N. of road 2½ km. S. E. of Hemse station, Hemse Parish, Hemse quadrangle, Hemse marl.

56-G-66 Rover Liljas hala, parish of Vasterhejde, lowermost part of Hogklint group, Visby quadrangle.

APPENDIX II: HOMOLOGIES OF SECONDARY RIBS

In the definition of the correlation coefficient secondary ribs were not considered because, on the basis of what is known about the branching pattern, it is not possible to conclude what the homologies between the secondary ribs of different specimens are. The following is a discussion of the possible homologies that may exist between secnondary ribs of the fossils studied.

Between any two given primary ribs or between a given lateralmost primary rib and the lateral commisure on the fossils studied there may be 0, 1, 2, or 3 secondary ribs. Hence, for two specimens A and B there are 10 possible combinations of numbers of secondaries between two given primaries or between a lateralmost primary and the lateral commisure. Each of these combinations is listed below and the possible homologies are noted.

Q_A and Q_B are the number of secondaries in the region compared on specimens A and B respectively.

Case 1: $Q_A=Q_B=0$.

Case 2: $Q_A=0 \quad Q_B=1$.

Case 3: $Q_A=0 \quad Q_B=2$.

Case 4: $Q_A=0 \quad Q_B=3$.

Case 5: $Q_A=Q_B=1$. In this case it is possible the two secondaries present are homologous but it is also possible that they are not homologous.

Case 6: $Q_A=1$ $Q_B=2$. In this case the secondary on specimen A may or may not be homologous to one of the two secondaries on specimen B.

Case 7: $Q_A=1$ $Q_B=3$. In this case the secondary on specimen A may or may not be homologous to one of the 3 secondaries on specimen B.

Case 8: $Q_A=2$ $Q_B=2$. In this case the following interpretations are possible: a) the two secondaries on specimen a are homologous to the two secondaries of specimen B, b) the most medial secondary on specimen A is homologous with the most lateral secondary on specimen B and the remaining secondaries are not homologous, c) same as above with B and A interchanged, and d) none of the secondaries present are homologous.

Case 9: $Q_A=2$ $Q_B=3$. Let the medial and lateral secondaries on A be denoted by A_1 and A_2 respectively and the medial, middle and lateral secondaries of B be denoted by B_1, B_2, and B_3 respectively. The following interpretations are possible: a) A_1 is homologous with B_1 and A_2 is homologous with B_2; b) A_1 is homologous with B_1 and A_2 is homologous with B_3; c) A_1 is homologous with B_1 but A_2 is not homologous with B_2 or B_3; d) A_1 is homologous with B_2 and A_2 is homologous with B_3; e) A_1 is homologous with B_2 but A_2 is not homologous with B_3; f) A_1 is homologous with B_3 and A_2 is not homologous with any of the secondaries on specimen B; g) A_1 is not homologous to any of the secondaries on specimen B but A_2 is homologous

to B_1, B_2, or B_3; h) none of the secondaries present are homologous.

Case 10: $Q_A=Q_B=3$. Let the medial, middle and lateral secondaries of specimens A and B be denoted by A_1, A_2, A_3 and B_1, B_2, B_3 respectively. The following interpretations are possible: a) A_1, A_2 and A_3 are homologous to B_1, B_2, and B_3 respectively; b) A_1 and A_2 are homologous to B_1 and B_2 respectively and A_3 is not homologous to B_3; c) A_1 is homologous to B_1 and A_2 is homologous to B_3; d) A_1 is homologous to B_1 and A_3 is homologous to B_2; e) A_1 is homologous to B_1 and A_3 is homologous to B_3; f) A_1 is homologous to B_1 and neither A_2 nor A_3 are homologous to secondaries on specimen B; g) A_1 is homologous to B_2 and A_2 is homologous to B_3; h) A_1 is homologous to B_2 and A_3 is homologous to B_3; i) A_1 is homologous to B_2 and neither A_2 nor A_3 are homologous to secondaries on specimen B; j) A_1 is homologous to B_3 and neither A_2 nor A_3 are homologous to secondaries on specimen B; k) A_2 is homologous to B_1 and A_3 is homologous to B_2; l) A_2 is homologous to B_2 and A_3 is homologous to B_3; m) A_2 is homologous to B_2 and A_3 is not homologous to any of the secondaries on specimen B; n) A_2 is homologous to B_2 and A_3 is homologous to B_3 but A_1 is not homologous to B_1; o) A_2 is homologous with B_2 but neither A_1 nor A_3

are homologous to any of the secondaries on specimen B; p) A_2 is homologous with B_3 but none of the other secondaries are homologous; q) A_3 is homologous with B_3 but none of the other secondaries are homologous; and r) none of the secondaries are homologous.

DATA:

The following section consists of a list of the values of the growth line spacings for the Upper Visby marl, Mulde marl, Hemse group, and Eke group which are listed on pages 38,39,40. The data for each specimen is listed in the order given on pages 38,39,&40. The growth line spacings intercepted by branches which do not have an adjacent node at their anterior end are listed as negative numbers. The growth line spacings separating nodes, which have no associated insert rib,from the anterior and lateral commissure are listed as negative numbers in the position corresponding to the associated insert rib. Zeros are placed in the positionsin the sequence for a specimen corresponding to branches, and insert ribs and corresponding nodes, which were not present on the specimen. All other data is listed as positive numbers.

THE FOLLOWING IS A TABULATION OF THE DATA FOR SPECIMENS FROM THE UPPER VISBY MARL. THE DATA FOR EACH SPECIMEN IS LISTED IN THE ORDER GIVEN ON PAGE 38.

SPECIMEN I

1.E0	1.E0	1.E0	10.E0
3.E0	1.E0	-18.E0	-8.E0
-8.E0	9.E0	4.E0	7.E0
5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-6.E0
-6.E0	-11.E0	-11.E0	-10.E0
-10.E0	-12.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	8.E0	0.E0	0.E0
0.E0	0.E0	16.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	-20.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
10.E0	-10.E0	-10.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	15.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	7.E0	8.E0	-13.E0
-5.E0	-5.E0	0.E0	0.E0
6.E0	-14.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 2

1.E0	1.E0	1.E0	7.E0
1.E0	1.E0	-14.E0	-8.E0
-8.E0	6.E0	5.E0	5.E0
6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-8.E0
-8.E0	-9.E0	-9.E0	-9.E0
-9.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0

0.E0	5.E0	-12.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	12.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
-17.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 3

0.E0	1.E0	1.E0	6.E0
4.E0	2.E0	10.E0	-21.E0
12.E0	6.E0	6.E0	4.E0
13.E0	-17.E0	-17.E0	0.E0
0.E0	0.E0	-9.E0	-9.E0
10.E0	-17.E0	-17.E0	-17.E0
9.E0	-12.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	6.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	1.E0	8.E0
9.E0	-19.E0	-19.E0	-18.E0
-18.E0	-28.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	11.E0
15.E0	-14.E0	-14.E0	-10.E0
-10.E0	10.E0	-17.E0	-17.E0
0.E0	0.E0	0.E0	0.E0
11.E0	-17.E0	-17.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-22.E0	-22.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 4

2.E0	1.E0	1.E0	5.E0
3.E0	5.E0	8.E0	-18.E0
-18.E0	7.E0	9.E0	-17.E0
5.E0	-15.E0	10.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	-10.E0	-10.E0	0.E0
0.E0	-12.E0	-12.E0	0.E0
0.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	10.E0
-18.E0	-8.E0	-8.E0	0.E0
0.E0	5.E0	-19.E0	1.E0
0.E0	0.E0	-18.E0	-18.E0
-24.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	5.E0
6.E0	-15.E0	-15.E0	-14.E0
-14.E0	4.E0	-20.E0	8.E0
0.E0	0.E0	-12.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 5

1.E0	1.E0	1.E0	3.E0
4.E0	2.E0	4.E0	10.E0

10.E0	9.E0	9.E0	5.E0
5.E0	12.E0	12.E0	-15.E0
-15.E0	-15.E0	-15.E0	8.E0
8.E0	8.E0	-8.E0	-21.E0
11.E0	11.E0	11.E0	-12.E0
-12.E0	-12.E0	-12.E0	17.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-20.E0
-20.E0	0.E0	0.E0	0.E0
0.E0	-30.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
13.E0	-17.E0	-17.E0	0.E0
0.E0	0.E0	0.E0	-30.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	12.E0
12.E0	-10.E0	-10.E0	-10.E0
-10.E0	20.E0	-10.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
-30.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 6

1.E0	1.E0	1.E0	6.E0
5.E0	5.E0	1.E0	-14.E0
6.E0	5.E0	6.E0	6.E0
8.E0	5.E0	-13.E0	0.E0
0.E0	-8.E0	-8.E0	5.E0
-10.E0	-9.E0	6.E0	6.E0
6.E0	-7.E0	-7.E0	6.E0
6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	-22.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	14.E0	-8.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
20.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 7

1.E0	1.E0	1.E0	7.E0
4.E0	4.E0	2.E0	-6.E0
-6.E0	-9.E0	-9.E0	-9.E0
-9.E0	-11.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 8

1.E0	1.E0	1.E0	6.E0
2.E0	2.E0	-18.E0	-12.E0
9.E0	6.E0	4.E0	5.E0
5.E0	0.E0	0.E0	0.E0
0.E0	-3.E0	-3.E0	-10.E0
-10.E0	6.E0	8.E0	7.E0
5.E0	10.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	9.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	10.E0
-12.E0	-2.E0	-2.E0	0.E0
0.E0	6.E0	-14.E0	-14.E0
0.E0	0.E0	0.E0	0.E0
11.E0	-9.E0	-9.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	16.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	18.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
12.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 9

1.E0	0.E0	0.E0	4.E0
1.E0	1.E0	1.E0	10.E0
-23.E0	4.E0	4.E0	3.E0
3.E0	-24.E0	9.E0	-13.E0
-13.E0	0.E0	0.E0	12.E0
9.E0	4.E0	6.E0	5.E0
4.E0	9.E0	9.E0	0.E0
0.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	9.E0

-21.E0	-12.E0	-12.E0	0.E0
0.E0	-29.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-22.E0	-22.E0	0.E0
0.E0	0.E0	0.E0	12.E0
-17.E0	-17.E0	0.E0	0.E0
0.E0	0.E0	1.E0	-28.E0
7.E0	0.E0	0.E0	-21.E0
-21.E0	3.E0	23.E0	9.E0
-3.E0	-3.E0	-17.E0	-17.E0
10.E0	-19.E0	-19.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-21.E0	-21.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 10

1.E0	0.E0	0.E0	4.E0
3.E0	3.E0	4.E0	-15.E0
-15.E0	4.E0	4.E0	-16.E0
4.E0	3.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	-12.E0
-12.E0	-12.E0	-12.E0	0.E0
0.E0	11.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	8.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-14.E0
-14.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	4.E0
-16.E0	-12.E0	-12.E0	0.E0
0.E0	6.E0	8.E0	-14.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 11

1.E0	1.E0	1.E0	9.E0
3.E0	1.E0	9.E0	-13.E0
-13.E0	6.E0	5.E0	4.E0
9.E0	-13.E0	-13.E0	0.E0

0.E0	0.E0	0.E0	-13.E0
-13.E0	-14.E0	-14.E0	7.E0
-17.E0	-12.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-11.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-19.E0	-19.E0
0.E0	0.E0	0.E0	0.E0
-24.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-19.E0
-19.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-19.E0	15.E0
0.E0	0.E0	-4.E0	-4.E0
8.E0	7.E0	-16.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 12

2.E0	1.E0	1.E0	9.E0
5.E0	7.E0	3.E0	-11.E0
-11.E0	6.E0	7.E0	-13.E0
8.E0	8.E0	9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	11.E0	8.E0	7.E0
7.E0	-6.E0	-6.E0	-6.E0
-6.E0	6.E0	7.E0	7.E0
-8.E0	-8.E0	-8.E0	-8.E0
9.E0	-12.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-12.E0	-12.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-12.E0
-12.E0	0.E0	0.E0	0.E0
0.E0	4.E0	7.E0	8.E0
-10.E0	-10.E0	-9.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 13

1.E0	1.E0	1.E0	4.E0
3.E0	4.E0	5.E0	-14.E0
8.E0	7.E0	3.E0	5.E0
8.E0	7.E0	6.E0	0.E0
0.E0	-16.E0	-16.E0	12.E0
-18.E0	7.E0	8.E0	7.E0
-19.E0	-16.E0	-16.E0	-16.E0
-16.E0	-17.E0	-17.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	8.E0
13.E0	-16.E0	-16.E0	-11.E0
-11.E0	15.E0	-15.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
16.E0	-14.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	10.E0
-27.E0	-17.E0	-17.E0	0.E0
0.E0	11.E0	-19.E0	8.E0
0.E0	0.E0	-11.E0	-11.E0

-30.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 14

1.E0	1.E0	1.E0	9.E0
3.E0	3.E0	7.E0	-9.E0
-9.E0	6.E0	4.E0	3.E0
5.E0	-11.E0	9.E0	0.E0
0.E0	0.E0	0.E0	-9.E0
-9.E0	-11.E0	-11.E0	-12.E0
-12.E0	-11.E0	-11.E0	0.E0
0.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
12.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	9.E0	10.E0
-11.E0	-2.E0	-2.E0	0.E0
0.E0	10.E0	-10.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 15

1.E0	1.E0	2.E0	9.E0
6.E0	3.E0	8.E0	-21.E0
14.E0	13.E0	10.E0	5.E0
10.E0	15.E0	-21.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	14.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	8.E0
11.E0	-19.E0	-19.E0	-16.E0
-16.E0	-32.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
5.E0	-27.E0	10.E0	0.E0
0.E0	-17.E0	-17.E0	0.E0
-0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-19.E0
-19.E0	0.E0	0.E0	0.E0
0.E0	15.E0	-17.E0	-17.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 16

1.E0	1.E0	1.E0	4.E0
2.E0	2.E0	5.E0	-17.E0
-17.E0	8.E0	11.E0	5.E0
10.E0	-16.E0	12.E0	0.E0
0.E0	0.E0	0.E0	-9.E0
-9.E0	-9.E0	-8.E0	-14.E0
-14.E0	-9.E0	-9.E0	0.E0
0.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	14.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	-20.E0
11.E0	0.E0	0.E0	-9.E0
-9.E0	15.E0	-8.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
-23.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-11.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	8.E0	-15.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-17.E0	-17.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 17

1.E0	1.E0	1.E0	6.E0
4.E0	4.E0	4.E0	-5.E0
-5.E0	-7.E0	6.E0	-7.E0
-7.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-1.E0	-1.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-6.E0	-6.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-7.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 18

1.E0	1.E0	1.E0	6.E0
2.E0	4.E0	-13.E0	-7.E0

-7.E0	-11.E0	-11.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	4.E0	-11.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 19

1.E0	2.E0	2.E0	11.E0
5.E0	2.E0	9.E0	-16.E0
-16.E0	0.E0	0.E0	10.E0
10.E0	-18.E0	-18.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-15.E0
-15.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	26.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	10.E0	6.E0	-20.E0
-14.E0	-14.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-20.E0
13.E0	0.E0	0.E0	-7.E0
-7.E0	8.E0	-22.E0	-22.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 20

1.E0	1.E0	1.E0	3.E0
4.E0	2.E0	7.E0	-16.E0
7.E0	6.E0	5.E0	5.E0
8.E0	-12.E0	-12.E0	0.E0
0.E0	-9.E0	-9.E0	-9.E0
-9.E0	-10.E0	-10.E0	-12.E0
-12.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-14.E0
7.E0	0.E0	0.E0	-7.E0
-7.E0	8.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
5.E0	-16.E0	-16.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-12.E0
-12.E0	0.E0	0.E0	0.E0

0.E0	11.E0	-10.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 21

1.E0	1.E0	1.E0	2.E0
3.E0	2.E0	-19.E0	-17.E0
4.E0	7.E0	9.E0	10.E0
5.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	-11.E0	-9.E0
-9.E0	-7.E0	-7.E0	-7.E0
-7.E0	6.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-11.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	14.E0	-7.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-12.E0
-12.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-12.E0	5.E0
0.E0	0.E0	-7.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 22

1.E0	1.E0	2.E0	-6.E0
4.E0	0.E0	0.E0	0.E0
0.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-2.E0	0.E0	0.E0	0.E0

0.E0	6.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	1.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 23

1.E0	1.E0	1.E0	7.E0
6.E0	7.E0	8.E0	-8.E0
-8.E0	-9.E0	-9.E0	-8.E0
-8.E0	-7.E0	3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-4.E0	-4.E0	13.E0

0.E0	13.E0	13.E0	13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	1.E0	-16.E0
-16.E0	0.E0	0.E0	0.E0
0.E0	2.E0	-15.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-11.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-7.E0	6.E0
0.E0	0.E0	-1.E0	-1.E0
6.E0	-11.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	-17.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 24

1.E0	1.E0	1.E0	5.E0
5.E0	5.E0	6.E0	-4.E0
-4.E0	-4.E0	-4.E0	-4.E0
-4.E0	-3.E0	-3.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	8.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 25

0.E0	1.E0	1.E0	11.E0
2.E0	1.E0	6.E0	-4.E0
-4.E0	8.E0	8.E0	8.E0
6.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	-5.E0
-5.E0	-5.E0	-5.E0	-6.E0
-6.E0	6.E0	4.E0	0.E0
0.E0	0.E0	0.E0	11.E0
0.E0	11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	11.E0	-16.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	10.E0	1.E0	1.E0
-5.E0	-5.E0	-5.E0	-5.E0
-16.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-10.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 26

2.E0	1.E0	1.E0	-11.E0
-11.E0	3.E0	7.E0	0.E0
0.E0	0.E0	0.E0	-8.E0
-8.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-11.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-8.E0	-4.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	-10.E0
9.E0	0.E0	0.E0	-1.E0
-1.E0	11.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0

-12.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 27

1.E0	1.E0	1.E0	4.E0
3.E0	4.E0	6.E0	-5.E0
-5.E0	-6.E0	3.E0	-6.E0
3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-3.E0	-3.E0	0.E0
0.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	-10.E0
9.E0	-10.E0	-5.E0	-6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-6.E0	-3.E0	6.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-6.E0	5.E0
0.E0	0.E0	-1.E0	-1.E0
7.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	8.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	8.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 28

0.E0	2.E0	2.E0	9.E0
10.E0	8.E0	11.E0	2.E0
2.E0	-4.E0	-4.E0	-6.E0
-6.E0	-3.E0	-3.E0	-3.E0
-3.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-16.E0
-14.E0	-14.E0	-5.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-6.E0	-3.E0	10.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-6.E0	-6.E0

0.E0	0.E0	0.E0	0.E0
10.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	9.E0	4.E0	4.E0
-3.E0	-3.E0	-3.E0	-3.E0
9.E0	-7.E0	6.E0	0.E0
0.E0	-1.E0	-1.E0	8.E0
5.E0	-8.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 29

1.E0	2.E0	1.E0	10.E0
4.E0	3.E0	-12.E0	-1.E0
-1.E0	-7.E0	-7.E0	6.E0
6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-3.E0
-3.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	-13.E0
-11.E0	9.E0	-1.E0	-7.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
-9.E0	0.E0	10.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	11.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
10.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	11.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
-14.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-14.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 30

2.E0	1.E0	1.E0	2.E0
2.E0	3.E0	5.E0	-16.E0
9.E0	4.E0	4.E0	5.E0
3.E0	-13.E0	-13.E0	0.E0
0.E0	-7.E0	-7.E0	8.E0
-13.E0	-13.E0	9.E0	-11.E0

7.E0	9.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	-18.E0
-19.E0	-19.E0	-16.E0	-17.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-16.E0	-13.E0	4.E0	-16.E0
8.E0	0.E0	0.E0	-8.E0
-8.E0	7.E0	10.E0	-13.E0
-3.E0	-3.E0	0.E0	0.E0
10.E0	-10.E0	-10.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-13.E0	-13.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	11.E0	-9.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-13.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-13.E0	-13.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 31

1.E0	2.E0	1.E0	-14.E0
4.E0	1.E0	-15.E0	0.E0

0.E0	3.E0	-10.E0	9.E0
-14.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
-7.E0	0.E0	0.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-14.E0	-15.E0	0.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-14.E0	0.E0	7.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-11.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
-17.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	14.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 32

1.E0	1.E0	1.E0	16.E0
5.E0	5.E0	4.E0	-4.E0
-4.E0	10.E0	12.E0	-15.E0
10.E0	9.E0	9.E0	0.E0
0.E0	0.E0	0.E0	-5.E0
-5.E0	-3.E0	-3.E0	0.E0
0.E0	-5.E0	-5.E0	-7.E0
-7.E0	-7.E0	-7.E0	-21.E0
-20.E0	-20.E0	-4.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-15.E0	-16.E0	15.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	-22.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-22.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-22.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	10.E0
-12.E0	-2.E0	-2.E0	0.E0
0.E0	9.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
9.E0	-13.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	9.E0

11.E0	-13.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 33

1.E0	2.E0	1.E0	6.E0
5.E0	2.E0	8.E0	-16.E0
-16.E0	15.E0	13.E0	7.E0
-20.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	-2.E0
-2.E0	-4.E0	-4.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-22.E0	-23.E0	-16.E0	-17.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-20.E0	-15.E0	9.E0	14.E0
-16.E0	-2.E0	-2.E0	0.E0
0.E0	6.E0	15.E0	-19.E0
-4.E0	-4.E0	0.E0	0.E0
-25.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-25.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	6.E0
12.E0	-15.E0	-15.E0	-9.E0

-9.E0	6.E0	-19.E0	-19.E0
0.E0	0.E0	0.E0	0.E0
9.E0	-16.E0	-16.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-17.E0	-17.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 34

1.E0	1.E0	2.E0	5.E0
4.E0	3.E0	-22.E0	11.E0
-18.E0	12.E0	-19.E0	-19.E0
15.E0	0.E0	0.E0	-7.E0
-7.E0	0.E0	0.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	-23.E0
-22.E0	-22.E0	-18.E0	-19.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
11.E0	0.E0	6.E0	11.E0
13.E0	-8.E0	-8.E0	-6.E0
-6.E0	6.E0	11.E0	14.E0
-8.E0	-8.E0	-5.E0	-5.E0
6.E0	-19.E0	12.E0	0.E0

0.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	12.E0
-14.E0	-2.E0	-2.E0	0.E0
0.E0	-25.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 35

1.E0	1.E0	1.E0	13.E0
8.E0	15.E0	9.E0	-11.E0
-11.E0	5.E0	4.E0	-9.E0
-9.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
-11.E0	-12.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-25.E0
-24.E0	-24.E0	-11.E0	-16.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-9.E0	-15.E0	5.E0	9.E0

10.E0	-12.E0	-12.E0	-11.E0
-11.E0	7.E0	-19.E0	8.E0
0.E0	0.E0	-11.E0	-11.E0
13.E0	-13.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	-26.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	8.E0
-21.E0	-13.E0	-13.E0	0.E0
0.E0	-26.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
13.E0	-13.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 36

1.E0	1.E0	1.E0	7.E0
4.E0	2.E0	-11.E0	4.E0
-4.E0	5.E0	5.E0	6.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-2.E0
-2.E0	-2.E0	-2.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-12.E0

-11.E0	-11.E0	-4.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-9.E0	0.E0	10.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 37

1.E0	1.E0	1.E0	3.E0
2.E0	1.E0	-17.E0	-14.E0
7.E0	9.E0	4.E0	3.E0
4.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-13.E0	-12.E0	7.E0	0.E0
0.E0	0.E0	0.E0	-17.E0
-17.E0	-17.E0	-14.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-16.E0	-7.E0	12.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-8.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-18.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 38

1.E0	1.E0	1.E0	6.E0
3.E0	2.E0	6.E0	7.E0
-11.E0	5.E0	2.E0	3.E0
-3.E0	-11.E0	-11.E0	-4.E0
-4.E0	0.E0	0.E0	7.E0
7.E0	9.E0	-12.E0	8.E0
7.E0	-12.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	-18.E0
-17.E0	-17.E0	-11.E0	-14.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-15.E0	-11.E0	10.E0	-9.E0
6.E0	0.E0	0.E0	-3.E0
-3.E0	6.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-12.E0
3.E0	0.E0	0.E0	-9.E0
-9.E0	10.E0	-9.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
13.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 39

1.E0	3.E0	4.E0	-4.E0
-4.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
-4.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
5.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

-8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-1.E0	-1.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 40

1.E0	2.E0	2.E0	8.E0
7.E0	4.E0	-10.E0	-2.E0
-2.E0	-3.E0	-3.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-12.E0
-10.E0	-10.E0	-2.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-6.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-13.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-13.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 41

1.E0	1.E0	1.E0	7.E0
2.E0	2.E0	9.E0	-8.E0
-8.E0	6.E0	5.E0	5.E0
5.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
-7.E0	-8.E0	-8.E0	-8.E0
-8.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	-16.E0
-15.E0	-15.E0	-8.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-13.E0	-6.E0	8.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	4.E0	-13.E0	-13.E0

0.E0	0.E0	0.E0	0.E0
5.E0	-12.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	16.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 42

1.E0	0.E0	0.E0	-11.E0
2.E0	2.E0	8.E0	0.E0
0.E0	-9.E0	-9.E0	7.E0
-9.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
-11.E0	-11.E0	0.E0	-9.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
-9.E0	-3.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
9.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 43

1.E0	0.E0	0.E0	-13.E0
2.E0	3.E0	-13.E0	0.E0
0.E0	-11.E0	5.E0	4.E0
8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-6.E0	-6.E0	-6.E0

-6.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	-13.E0
7.E0	-13.E0	0.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-11.E0	0.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-14.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 44

1.E0	0.E0	1.E0	6.E0
4.E0	4.E0	4.E0	-13.E0

-13.E0	5.E0	-15.E0	5.E0
-14.E0	-14.E0	6.E0	0.E0
0.E0	0.E0	0.E0	-10.E0
-10.E0	0.E0	0.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	-3.E0	-3.E0	-19.E0
-19.E0	-18.E0	-13.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-14.E0	-14.E0	-20.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 45

1.E0	1.E0	1.E0	-14.E0
2.E0	3.E0	12.E0	0.E0
0.E0	9.E0	4.E0	3.E0
-10.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	-3.E0
-3.E0	-8.E0	-8.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-14.E0
-14.E0	-13.E0	0.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-10.E0	-1.E0	2.E0	12.E0
-13.E0	-1.E0	-1.E0	0.E0
0.E0	2.E0	9.E0	-13.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	12.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 46

1.E0	1.E0	2.E0	-6.E0
5.E0	3.E0	-5.E0	0.E0
0.E0	-1.E0	-1.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	1.E0	6.E0
-7.E0	-1.E0	-1.E0	0.E0
0.E0	3.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
3.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	7.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 47

1.E0	1.E0	0.E0	-22.E0
4.E0	7.E0	11.E0	0.E0
0.E0	12.E0	8.E0	-15.E0
-15.E0	-11.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	-5.E0
-5.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-23.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-23.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-23.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	13.E0	-10.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 48

1.E0	1.E0	1.E0	-14.E0
5.E0	5.E0	-14.E0	0.E0
0.E0	-6.E0	-6.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	4.E0
4.E0	-10.E0	-10.E0	-10.E0

-10.E0	6.E0	-10.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	3.E0	5.E0	5.E0
-4.E0	-4.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 49

1.E0	0.E0	1.E0	6.E0
4.E0	3.E0	-9.E0	-4.E0
-4.E0	-6.E0	-6.E0	-6.E0
5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	8.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 50

1.E0	2.E0	1.E0	-15.E0
8.E0	9.E0	-14.E0	0.E0
0.E0	-7.E0	-7.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

11.E0	11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-12.E0
6.E0	0.E0	0.E0	-6.E0
-6.E0	-13.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-18.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 51

1.E0	1.E0	1.E0	10.E0
3.E0	3.E0	10.E0	-9.E0
-9.E0	6.E0	6.E0	6.E0
6.E0	-9.E0	-9.E0	0.E0

0.E0	0.E0	0.E0	-9.E0
-9.E0	-9.E0	-9.E0	-9.E0
-9.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 52

1.E0	2.E0	1.E0	7.E0
4.E0	4.E0	8.E0	-17.E0
-17.E0	10.E0	7.E0	6.E0
6.E0	-17.E0	-17.E0	0.E0
0.E0	0.E0	0.E0	-10.E0
-10.E0	-9.E0	-9.E0	-15.E0
-15.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-18.E0
-18.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-20.E0	-20.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	11.E0
11.E0	-10.E0	-10.E0	-10.E0
-10.E0	7.E0	11.E0	-15.E0
-9.E0	-9.E0	0.E0	0.E0
6.E0	6.E0	6.E0	-15.E0
-15.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 53

1.E0	2.E0	2.E0	8.E0
4.E0	4.E0	4.E0	-9.E0
-9.E0	9.E0	7.E0	-8.E0
-8.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	-4.E0
-4.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-15.E0	7.E0
0.E0	0.E0	-8.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 54

0.E0	7.E0	7.E0	-8.E0
-8.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 55

1.E0	2.E0	1.E0	5.E0
6.E0	5.E0	5.E0	6.E0
6.E0	12.E0	7.E0	4.E0
7.E0	7.E0	4.E0	-15.E0
-15.E0	-15.E0	-15.E0	-8.E0
-8.E0	-13.E0	10.E0	-18.E0
-18.E0	-15.E0	-15.E0	-15.E0
-15.E0	-18.E0	-18.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	10.E0
10.E0	-10.E0	-10.E0	-10.E0
-10.E0	-29.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	19.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	-29.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 56

1.E0	2.E0	0.E0	10.E0
7.E0	1.E0	17.E0	-7.E0
-7.E0	10.E0	7.E0	9.E0
6.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-3.E0	-3.E0	-10.E0
-10.E0	9.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	15.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	4.E0	14.E0	14.E0
-4.E0	-4.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	11.E0
10.E0	-9.E0	-9.E0	-11.E0
-10.E0	10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
5.E0	3.E0	10.E0	-14.E0
-14.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 57

1.E0	1.E0	2.E0	3.E0
4.E0	3.E0	-5.E0	-20.E0
12.E0	-5.E0	-5.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-12.E0
-12.E0	0.E0	0.E0	0.E0
0.E0	6.E0	10.E0	10.E0
-9.E0	-9.E0	-9.E0	-9.E0
16.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-24.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-20.E0	-20.E0
0.E0	0.E0	0.E0	0.E0
-25.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 58

1.E0	4.E0	3.E0	-8.E0
-9.E0	-9.E0	-9.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-8.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
5.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 59

1.E0	1.E0	1.E0	0.E0
4.E0	1.E0	8.E0	0.E0
0.E0	-20.E0	9.E0	-14.E0
-8.E0	-16.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	-11.E0	0.E0
0.E0	-15.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	16.E0
17.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	15.E0	-11.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	6.E0	11.E0	11.E0
-9.E0	-9.E0	-9.E0	-9.E0
6.E0	11.E0	11.E0	-9.E0
-9.E0	-9.E0	-9.E0	-17.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-16.E0
-16.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-16.E0	-16.E0
0.E0	0.E0	0.E0	0.E0
-18.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 60

1.E0	1.E0	1.E0	8.E0
1.E0	9.E0	9.E0	-5.E0
-5.E0	8.E0	8.E0	-4.E0
-4.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	-3.E0
-3.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	7.E0	-8.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 61

1.E0	1.E0	1.E0	7.E0
3.E0	4.E0	8.E0	-6.E0
-6.E0	5.E0	3.E0	-9.E0
-9.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	-5.E0
-5.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-6.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	-6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 62

1.E0	2.E0	1.E0	-6.E0
2.E0	2.E0	-7.E0	0.E0
0.E0	-4.E0	-4.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-9.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-9.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 63

1.E0	1.E0	1.E0	-9.E0
-9.E0	7.E0	6.E0	0.E0
0.E0	0.E0	0.E0	-2.E0
-2.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
9.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 64

1.E0	2.E0	2.E0	9.E0
9.E0	7.E0	5.E0	7.E0
4.E0	4.E0	-8.E0	6.E0
6.E0	8.E0	7.E0	-1.E0

-1.E0	-4.E0	-4.E0	-4.E0
-4.E0	0.E0	0.E0	-4.E0
-4.E0	-4.E0	-4.E0	-4.E0
-4.E0	-3.E0	-3.E0	-16.E0
12.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	8.E0
-9.E0	-1.E0	-1.E0	0.E0
0.E0	12.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
-16.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	14.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 65

1.E0	1.E0	1.E0	8.E0
2.E0	2.E0	11.E0	-13.E0
7.E0	6.E0	5.E0	6.E0
6.E0	-10.E0	-10.E0	0.E0
0.E0	-6.E0	-6.E0	-13.E0
-13.E0	7.E0	10.E0	8.E0
-13.E0	10.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	6.E0	8.E0	-17.E0
-9.E0	-9.E0	0.E0	0.E0
9.E0	-14.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0 1951
			1952*

THE FOLLOWING IS A TABULATION OF THE DATA FOR SPECIMENS FROM THE MULDE MARL . THE DATA FOR EACH SPECIMEN IS LISTED IN THE ORDER GIVEN ON PAGE 38 .

SPECIMEN I

1.E0	6.E0	5.E0	-3.E0
-3.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-10.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0

SPECIMEN 2

1.E0	2.E0	2.E0	-5.E0
-5.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 3

1.E0	2.E0	3.E0	-7.E0
5.E0	5.E0	4.E0	0.E0
0.E0	-2.E0	-2.E0	-1.E0
-1.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 4

1.E0	3.E0	2.E0	8.E0
7.E0	-13.E0	8.E0	-4.E0
-4.E0	-5.E0	-5.E0	0.E0

0.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	11.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
10.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	-16.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 5

1.E0	2.E0	1.E0	7.E0
7.E0	6.E0	4.E0	-9.E0
-9.E0	-9.E0	-9.E0	-11.E0
8.E0	11.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-9.E0

-9.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
11.E0	-14.E0	-3.E0	-3.E0
0.E0	0.E0	-19.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 6

1.E0	6.E0	8.E0	-5.E0
-5.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-5.E0	-5.E0	0.E0

0.E0	0.E0	0.E0	6.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	-12.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 7

1.E0	2.E0	2.E0	-9.E0
-9.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
-12.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 8

1.E0	2.E0	4.E0	8.E0
7.E0	4.E0	-10.E0	-4.E0
-4.E0	-5.E0	-5.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-15.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 9

1.E0	4.E0	6.E0	-6.E0
-6.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 10

1.E0	2.E0	4.E0	-11.E0
4.E0	5.E0	-9.E0	0.E0

0.E0	-7.E0	-7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-7.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	11.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	8.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 11

1.E0	3.E0	2.E0	-9.E0
7.E0	-10.E0	6.E0	0.E0
0.E0	-2.E0	-2.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	4.E0
-9.E0	-9.E0	0.E0	0.E0
0.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 12

1.E0	7.E0	8.E0	-3.E0
-3.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0	1 CA
0.E0	0.E0	0.E0	0.E0	
0.E0	0.E0	0.E0	-11.E0	
0.E0	0.E0	0.E0	0.E0	
0.E0	0.E0	8.E0	-3.E0	
-3.E0	0.E0	0.E0	0.E0	
0.E0	0.E0	0.E0	0.E0	
0.E0	0.E0	0.E0	0.E0	

SPECIMEN 13

1.E0	2.E0	1.E0	7.E0
-8.E0	4.E0	-9.E0	-1.E0
-1.E0	0.E0	0.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	-8.E0
-8.E0	-1.E0	-1.E0	-1.E0
-1.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 14

1.E0	3.E0	2.E0	3.E0
-4.E0	-3.E0	-3.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 15

1.E0	3.E0	2.E0	6.E0
7.E0	10.E0	-11.E0	-4.E0
-4.E0	-3.E0	-3.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-9.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
-14.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-14.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	6.E0
-10.E0	-4.E0	-4.E0	0.E0
0.E0	12.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 16

1.E0	1.E0	1.E0	9.E0
10.E0	7.E0	9.E0	-9.E0

-9.E0	-9.E0	-8.E0	8.E0
-11.E0	-9.E0	6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	9.E0
0.E0	-9.E0	-9.E0	-9.E0
-9.E0	10.E0	-10.E0	-10.E0
0.E0	0.E0	0.E0	0.E0
14.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	12.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 17

1.E0	4.E0	4.E0	7.E0
6.E0	7.E0	-10.E0	-3.E0
-3.E0	-4.E0	-4.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-15.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	5.E0
-12.E0	10.E0	0.E0	0.E0
-2.E0	-2.E0	2.E0	8.E0
-15.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 18

1.E0	2.E0	3.E0	7.E0
7.E0	8.E0	-21.E0	-15.E0
-15.E0	-15.E0	-15.E0	12.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	20.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	14.E0	9.E0
0.E0	-2.E0	-2.E0	0.E0
0.E0	22.E0	-3.E0	-3.E0

0.E0	0.E0	0.E0	0.E0
14.E0	-11.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-15.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	12.E0	-7.E0	-7.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 19

1.E0	4.E0	2.E0	-20.E0
8.E0	5.E0	17.E0	0.E0
0.E0	-12.E0	-12.E0	-17.E0
16.E0	-5.E0	-5.E0	0.E0
0.E0	11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-25.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	12.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
-25.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-15.E0	13.E0	0.E0	0.E0

-2.E0	-2.E0	6.E0	-18.E0
18.E0	0.E0	0.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 20

1.E0	10.E0	10.E0	6.E0
8.E0	6.E0	6.E0	-4.E0
-4.E0	-2.E0	-2.E0	-4.E0
-4.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	14.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	11.E0	9.E0	-8.E0
-9.E0	-9.E0	0.E0	0.E0
13.E0	8.E0	-10.E0	-14.E0
-14.E0	0.E0	0.E0	14.E0
-15.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	14.E0	-15.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	-20.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 21

1.E0	1.E0	1.E0	13.E0
3.E0	13.E0	8.E0	-6.E0
-6.E0	-16.E0	-16.E0	-6.E0
-6.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	9.E0	10.E0	-10.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 22

1.E0	1.E0	1.E0	8.E0
18.E0	7.E0	7.E0	-13.E0
-13.E0	-3.E0	-3.E0	-14.E0
-14.E0	-14.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	5.E0
-14.E0	-9.E0	-9.E0	0.E0
0.E0	-23.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
10.E0	-13.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-14.E0	-14.E0	0.E0	0.E0
0.E0	0.E0	-23.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-13.E0	-13.E0
0.E0	0.E0	0.E0	0.E0 227
			228*

DATA FOR THE HEMSE GROUP 1 CARD

THE FOLLOWING IS A TABULATION OF THE DATA FOR SPECIMENS FROM THE HEMSE GROUP. THE DATA FOR EACH SPECIMEN IS LISTED IN THE ORDER GIVEN ON PAGE 38.

SPECIMEN 1

1.E0	2.E0	1.E0	5.E0
4.E0	5.E0	6.E0	-5.E0
4.E0	4.E0	3.E0	3.E0
3.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-6.E0	-6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-5.E0	-5.E0	0.E0	0.E0
0.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	8.E0	-5.E0	-5.E0

0.E0	0.E0	0.E0	0.E0

SPECIMEN 2

1.E0	8.E0	6.E0	-5.E0
3.E0	4.E0	4.E0	0.E0
0.E0	-3.E0	-3.E0	-3.E0
1.E0	0.E0	0.E0	0.E0
2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	1.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-14.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 3

1.E0	4.E0	4.E0	2.E0
2.E0	3.E0	3.E0	2.E0
3.E0	3.E0	3.E0	-9.E0
-9.E0	2.E0	-9.E0	10.E0
0.E0	0.E0	10.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	3.E0
3.E0	3.E0	3.E0	5.E0
3.E0	5.E0	2.E0	2.E0
3.E0	-10.E0	-10.E0	1.E0
7.E0	-10.E0	1.E0	0.E0
0.E0	-6.E0	-6.E0	5.E0
3.E0	2.E0	-2.E0	-2.E0
-3.E0	-3.E0	5.E0	2.E0
4.E0	-3.E0	-3.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 4

1.E0	3.E0	3.E0	4.E0
4.E0	4.E0	4.E0	5.E0
5.E0	3.E0	3.E0	3.E0

3.E0	4.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
5.E0	3.E0	-3.E0	-3.E0
3.E0	2.E0	8.E0	2.E0
4.E0	-5.E0	-5.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 5

1.E0	1.E0	1.E0	3.E0
3.E0	3.E0	3.E0	-5.E0
-5.E0	4.E0	3.E0	3.E0
4.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	3.E0

-7.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	6.E0
3.E0	-4.E0	-1.E0	-1.E0
0.E0	0.E0	9.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 6

1.E0	3.E0	2.E0	4.E0
4.E0	5.E0	6.E0	3.E0
3.E0	-5.E0	4.E0	1.E0
3.E0	2.E0	3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	5.E0
4.E0	2.E0	-5.E0	3.E0
3.E0	4.E0	5.E0	4.E0
-4.E0	-4.E0	2.E0	2.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	7.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-8.E0
6.E0	0.E0	0.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 7

1.E0	2.E0	2.E0	10.E0
3.E0	3.E0	3.E0	-3.E0
-3.E0	7.E0	7.E0	7.E0
8.E0	8.E0	8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	12.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-10.E0	6.E0
0.E0	0.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	-16.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 8

1.E0	3.E0	3.E0	4.E0
3.E0	3.E0	-6.E0	1.E0
2.E0	3.E0	2.E0	2.E0
1.E0	0.E0	0.E0	0.E0
0.E0	9.E0	10.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-2.E0
1.E0	0.E0	0.E0	-1.E0
-1.E0	4.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
2.E0	-3.E0	-1.E0	-1.E0
0.E0	0.E0	-10.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 9

0.E0	1.E0	1.E0	4.E0
2.E0	2.E0	4.E0	-7.E0
3.E0	3.E0	3.E0	3.E0
3.E0	3.E0	3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
7.E0	0.E0	4.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
1.E0	3.E0	-7.E0	-7.E0
-4.E0	-4.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 10

1.E0	3.E0	3.E0	2.E0
1.E0	1.E0	3.E0	-4.E0

-4.E0	-5.E0	-5.E0	-3.E0
3.E0	-3.E0	-3.E0	5.E0
6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	5.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	3.E0	4.E0
-7.E0	-3.E0	-3.E0	0.E0
0.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 11

1.E0	2.E0	2.E0	3.E0
2.E0	2.E0	3.E0	-4.E0
2.E0	2.E0	2.E0	2.E0
-5.E0	3.E0	1.E0	0.E0
9.E0	8.E0	0.E0	7.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
8.E0	8.E0	-10.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	5.E0	2.E0	2.E0
-3.E0	-3.E0	-3.E0	2.E0
4.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	-3.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	4.E0	2.E0	3.E0
-4.E0	1.E0	2.E0	-3.E0

SPECIMEN 12

1.E0	1.E0	1.E0	2.E0
2.E0	1.E0	3.E0	3.E0
4.E0	3.E0	5.E0	4.E0
4.E0	3.E0	-9.E0	4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 13

0.E0	3.E0	3.E0	3.E0
2.E0	2.E0	3.E0	3.E0
3.E0	2.E0	3.E0	5.E0
2.E0	4.E0	8.E0	6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	2.E0	3.E0	4.E0
2.E0	-9.E0	4.E0	6.E0
1.E0	3.E0	-13.E0	4.E0
0.E0	0.E0	-9.E0	3.E0
4.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	3.E0
2.E0	4.E0	5.E0	6.E0

-9.E0	-9.E0	6.E0	4.E0
5.E0	-6.E0	-6.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 14

1.E0	3.E0	3.E0	4.E0
3.E0	3.E0	-4.E0	0.E0
0.E0	-1.E0	-1.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	2.E0
-4.E0	-2.E0	-2.E0	0.E0
0.E0	4.E0	2.E0	-4.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	4.E0
2.E0	-4.E0	-2.E0	-2.E0
0.E0	0.E0	4.E0	3.E0
3.E0	-1.E0	-1.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 15

0.E0	2.E0	2.E0	5.E0
3.E0	3.E0	3.E0	-2.E0
-2.E0	-4.E0	-4.E0	5.E0
5.E0	5.E0	5.E0	6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-8.E0
7.E0	0.E0	0.E0	-1.E0
-1.E0	-5.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
7.E0	7.E0	-1.E0	-1.E0
-1.E0	-1.E0	3.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	4.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 16

1.E0	1.E0	2.E0	4.E0
2.E0	2.E0	4.E0	3.E0
3.E0	4.E0	4.E0	3.E0
3.E0	4.E0	-10.E0	13.E0
8.E0	7.E0	8.E0	10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
9.E0	0.E0	3.E0	6.E0
8.E0	-8.E0	2.E0	-6.E0
-6.E0	11.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
4.E0	4.E0	6.E0	-3.E0
-3.E0	-1.E0	-1.E0	3.E0
3.E0	6.E0	-11.E0	-11.E0
-8.E0	-8.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 17

1.E0	3.E0	3.E0	7.E0
3.E0	3.E0	-4.E0	-2.E0
-2.E0	2.E0	2.E0	2.E0
2.E0	0.E0	0.E0	8.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	2.E0
2.E0	3.E0	3.E0	3.E0
3.E0	6.E0	6.E0	2.E0
-1.E0	-1.E0	4.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
5.E0	5.E0	-2.E0	-2.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 18

0.E0	1.E0	2.E0	3.E0
3.E0	2.E0	4.E0	3.E0
-5.E0	2.E0	2.E0	2.E0
-9.E0	3.E0	-10.E0	13.E0
0.E0	0.E0	0.E0	13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	8.E0

3.E0	-1.E0	-1.E0	10.E0
7.E0	5.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
4.E0	7.E0	3.E0	3.E0
3.E0	-5.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 19

0.E0	3.E0	3.E0	3.E0
3.E0	3.E0	3.E0	1.E0
1.E0	-8.E0	-8.E0	1.E0
1.E0	2.E0	2.E0	0.E0
4.E0	9.E0	0.E0	1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	6.E0	3.E0	3.E0
3.E0	2.E0	-8.E0	-5.E0
-5.E0	6.E0	2.E0	2.E0
-6.E0	-6.E0	-6.E0	-6.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	7.E0
1.E0	-7.E0	-6.E0	-6.E0
0.E0	0.E0	7.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	4.E0	2.E0	3.E0
-2.E0	-2.E0	-1.E0	-1.E0

SPECIMEN 20

0.E0	1.E0	2.E0	5.E0
3.E0	3.E0	7.E0	2.E0
8.E0	2.E0	2.E0	8.E0
2.E0	-9.E0	-9.E0	0.E0
0.E0	4.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	3.E0
3.E0	-9.E0	-9.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	17.E0
-1.E0	-1.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 21

1.E0	2.E0	3.E0	4.E0
-8.E0	-5.E0	-5.E0	2.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	4.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-8.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 22

1.E0	1.E0	1.E0	1.E0
2.E0	2.E0	2.E0	3.E0
4.E0	2.E0	-7.E0	2.E0
4.E0	5.E0	3.E0	5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	5.E0
3.E0	-4.E0	-4.E0	4.E0
4.E0	4.E0	5.E0	5.E0
-2.E0	-2.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
3.E0	-4.E0	-1.E0	-1.E0
0.E0	0.E0	2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 23

1.E0	3.E0	4.E0	3.E0
2.E0	1.E0	3.E0	-4.E0

-4.E0	2.E0	2.E0	2.E0
2.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-3.E0
-6.E0	-3.E0	-3.E0	0.E0
0.E0	7.E0	-3.E0	-3.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 24

1.E0	6.E0	5.E0	-8.E0
3.E0	5.E0	5.E0	0.E0
0.E0	-3.E0	1.E0	6.E0
4.E0	3.E0	4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

```
      0.E0          0.E0          0.E0          0.E0
      0.E0          0.E0         17.E0         -2.E0
     -2.E0          0.E0          0.E0          0.E0
      0.E0        -19.E0          0.E0          0.E0
      0.E0          0.E0          0.E0          0.E0
      0.E0          0.E0          0.E0          0.E0
      0.E0          0.E0          0.E0          6.E0
     10.E0          4.E0         -4.E0         -4.E0
      3.E0         -6.E0          7.E0         -4.E0
     -4.E0          0.E0          0.E0          0.E0
      0.E0          7.E0         -4.E0         -4.E0
      0.E0          0.E0          0.E0          0.E0  533
                                                     534*
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DATA FOR THE EKE GROUP 1 CARD

THE FOLLOWING IS A TABULATION OF THE DATA FOR SPECIMENS FROM THE EKE GROUP. THE DATA FOR EACH SPECIMEN IS LISTED IN THE ORDER GIVEN ON PAGE 38.

SPECIMEN I

1.E0	1.E0	1.E0	-5.E0
4.E0	4.E0	-5.E0	0.E0
0.E0	-1.E0	-1.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-1.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0

SPECIMEN 2

1.E0	2.E0	1.E0	5.E0
4.E0	4.E0	9.E0	4.E0
3.E0	7.E0	3.E0	5.E0
6.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	-12.E0
8.E0	0.E0	0.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	2.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	4.E0	8.E0
-11.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 3

1.E0	2.E0	2.E0	-6.E0
4.E0	4.E0	5.E0	0.E0
0.E0	-2.E0	-2.E0	-2.E0
-2.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 4

1.E0	2.E0	2.E0	-5.E0
4.E0	4.E0	-5.E0	0.E0
0.E0	-1.E0	-1.E0	-1.E0

-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	4.E0
-5.E0	-1.E0	-1.E0	0.E0
0.E0	7.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	-4.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 5

1.E0	1.E0	1.E0	8.E0
4.E0	9.E0	6.E0	-3.E0
-3.E0	5.E0	4.E0	-2.E0
-2.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-13.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 6

1.E0	2.E0	3.E0	5.E0
5.E0	3.E0	6.E0	-3.E0
2.E0	-3.E0	-3.E0	3.E0
3.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-4.E0	3.E0
-1.E0	-1.E0	0.E0	0.E0
7.E0	-4.E0	-4.E0	0.E0

0.E0	0.E0	0.E0	7.E0
3.E0	-4.E0	-1.E0	-1.E0
0.E0	0.E0	7.E0	3.E0
2.E0	-1.E0	-1.E0	-2.E0
-2.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 7

1.E0	1.E0	1.E0	2.E0
2.E0	3.E0	2.E0	-4.E0
-4.E0	-4.E0	3.E0	-3.E0
-3.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-1.E0	-1.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0

0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 8

1.E0	5.E0	4.E0	-5.E0
3.E0	3.E0	-6.E0	0.E0
0.E0	-2.E0	-2.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
-11.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 9

1.E0	1.E0	1.E0	4.E0
4.E0	4.E0	5.E0	4.E0
5.E0	4.E0	3.E0	4.E0
4.E0	4.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	7.E0
-13.E0	-6.E0	-6.E0	0.E0
0.E0	8.E0	-7.E0	5.E0
0.E0	0.E0	-2.E0	-2.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-9.E0
-9.E0	0.E0	0.E0	0.E0
0.E0	-15.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 10

1.E0	1.E0	2.E0	-5.E0
-5.E0	-4.E0	-4.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	4.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 11

1.E0	5.E0	6.E0	5.E0
1.E0	4.E0	4.E0	-4.E0
-4.E0	-8.E0	-8.E0	-4.E0
-4.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	5.E0
5.E0	-3.E0	-3.E0	-3.E0
-3.E0	7.E0	5.E0	4.E0
-3.E0	-3.E0	-4.E0	-4.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-8.E0	5.E0	0.E0	0.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 12

1.E0	1.E0	1.E0	10.E0
5.E0	7.E0	8.E0	-1.E0
-1.E0	-6.E0	-6.E0	-4.E0
-4.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	3.E0
-5.E0	-2.E0	-2.E0	0.E0
0.E0	9.E0	-4.E0	-4.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-6.E0	-6.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 13

1.E0	5.E0	6.E0	-6.E0
-6.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-6.E0
3.E0	0.E0	0.E0	-3.E0
-3.E0	7.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	6.E0
4.E0	-6.E0	-2.E0	-2.E0

0.E0	0.E0	9.E0	1.E0
-3.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 14

1.E0	1.E0	3.E0	-9.E0
4.E0	3.E0	6.E0	0.E0
0.E0	3.E0	2.E0	-4.E0
-4.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 15

1.E0	1.E0	1.E0	-5.E0
3.E0	3.E0	5.E0	-1.E0
-1.E0	-3.E0	-3.E0	-3.E0
-3.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	2.E0
-6.E0	5.E0	0.E0	0.E0
-1.E0	-1.E0	2.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 16

1.E0	1.E0	1.E0	-7.E0
3.E0	2.E0	-7.E0	0.E0
0.E0	-4.E0	-4.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	4.E0
6.E0	-3.E0	-3.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 17

1.E0	1.E0	1.E0	7.E0
6.E0	4.E0	8.E0	-2.E0
-2.E0	-3.E0	-3.E0	4.E0
3.E0	1.E0	1.E0	6.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 18

1.E0	2.E0	1.E0	-7.E0
5.E0	5.E0	-8.E0	0.E0
0.E0	-2.E0	-2.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-3.E0

-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 19

1.E0	2.E0	2.E0	8.E0
4.E0	4.E0	5.E0	-3.E0
-3.E0	-7.E0	3.E0	2.E0
2.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	7.E0
-7.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 20

1.E0	2.E0	1.E0	12.E0
4.E0	4.E0	7.E0	-1.E0
-1.E0	5.E0	8.E0	5.E0
6.E0	4.E0	-1.E0	10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-8.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	-16.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	12.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	13.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 21

1.E0	1.E0	1.E0	6.E0
5.E0	5.E0	6.E0	-3.E0
-3.E0	-4.E0	-4.E0	3.E0
-4.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	7.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-3.E0	2.E0	0.E0	0.E0
-1.E0	-1.E0	9.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 22

1.E0	3.E0	3.E0	5.E0
3.E0	1.E0	5.E0	-4.E0
-4.E0	-6.E0	4.E0	4.E0
4.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	3.E0
3.E0	-2.E0	-2.E0	-2.E0
-2.E0	6.E0	-7.E0	3.E0
0.E0	0.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
4.E0	-8.E0	-4.E0	-4.E0
0.E0	0.E0	5.E0	3.E0
3.E0	-5.E0	-5.E0	3.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 23

1.E0	1.E0	2.E0	7.E0
4.E0	2.E0	3.E0	-1.E0

-1.E0	3.E0	-4.E0	4.E0
4.E0	-4.E0	-4.E0	8.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	-7.E0
3.E0	0.E0	0.E0	3.E0
3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
3.E0	-4.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 24

1.E0	1.E0	1.E0	10.E0
3.E0	6.E0	-11.E0	-1.E0
-1.E0	-8.E0	4.E0	-5.E0
4.E0	-5.E0	3.E0	0.E0
7.E0	9.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-13.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 25

1.E0	1.E0	1.E0	7.E0
4.E0	5.E0	8.E0	2.E0
-5.E0	3.E0	-8.E0	-7.E0
4.E0	-4.E0	-4.E0	8.E0
7.E0	0.E0	0.E0	6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	-14.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 26

1.E0	2.E0	1.E0	4.E0
4.E0	2.E0	-13.E0	-8.E0
-8.E0	5.E0	5.E0	6.E0
7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-9.E0	7.E0	0.E0	0.E0

-2.E0	-2.E0	2.E0	4.E0
5.E0	-9.E0	-9.E0	3.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 27

1.E0	1.E0	1.E0	4.E0
4.E0	3.E0	4.E0	5.E0
5.E0	5.E0	5.E0	6.E0
6.E0	5.E0	5.E0	7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
5.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 28

1.E0	3.E0	3.E0	4.E0
4.E0	2.E0	3.E0	-4.E0
-4.E0	-4.E0	-4.E0	2.E0
2.E0	2.E0	-5.E0	0.E0
4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-6.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 29

1.E0	1.E0	1.E0	3.E0
3.E0	3.E0	7.E0	4.E0
4.E0	3.E0	3.E0	3.E0
3.E0	-2.E0	-2.E0	7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	10.E0	-1.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
2.E0	-4.E0	-2.E0	-2.E0
0.E0	0.E0	4.E0	5.E0
0.E0	2.E0	2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 30

1.E0	1.E0	1.E0	4.E0
4.E0	4.E0	4.E0	5.E0
5.E0	5.E0	3.E0	4.E0
6.E0	-9.E0	5.E0	12.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	4.E0
5.E0	2.E0	2.E0	-4.E0
-4.E0	10.E0	3.E0	3.E0
-2.E0	-2.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
2.E0	-6.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 31

1.E0	1.E0	2.E0	6.E0
4.E0	5.E0	7.E0	-5.E0
-5.E0	4.E0	4.E0	4.E0
-5.E0	-3.E0	-3.E0	0.E0
8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	-11.E0

7.E0	0.E0	0.E0	3.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	2.E0
7.E0	-11.E0	-4.E0	3.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 32

1.E0	1.E0	1.E0	4.E0
11.E0	3.E0	7.E0	3.E0
5.E0	-1.E0	-1.E0	3.E0
2.E0	6.E0	6.E0	0.E0
5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	7.E0
5.E0	-3.E0	-3.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	2.E0
8.E0	-6.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 33

1.E0	1.E0	1.E0	2.E0
1.E0	2.E0	3.E0	-9.E0
-9.E0	4.E0	4.E0	3.E0
3.E0	7.E0	6.E0	7.E0
0.E0	6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	11.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
-8.E0	5.E0	0.E0	0.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 34

1.E0	1.E0	1.E0	3.E0
3.E0	4.E0	4.E0	5.E0
5.E0	5.E0	5.E0	4.E0
9.E0	9.E0	4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	10.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	4.E0	-11.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
-15.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	10.E0
-5.E0	-5.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-9.E0
4.E0	0.E0	0.E0	-5.E0
-5.E0	8.E0	2.E0	-7.E0
-5.E0	-5.E0	0.E0	0.E0

SPECIMEN 35

1.E0	1.E0	1.E0	6.E0
5.E0	6.E0	7.E0	3.E0
-5.E0	-6.E0	3.E0	2.E0
1.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-4.E0
2.E0	0.E0	0.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	3.E0
5.E0	6.E0	-5.E0	-5.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 36

1.E0	2.E0	2.E0	7.E0
6.E0	6.E0	4.E0	-10.E0

3.E0	3.E0	5.E0	3.E0
5.E0	9.E0	4.E0	0.E0
0.E0	7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	6.E0
5.E0	-7.E0	-7.E0	-8.E0
2.E0	6.E0	6.E0	2.E0
-7.E0	-7.E0	6.E0	6.E0
6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-13.E0	-13.E0	0.E0	0.E0
0.E0	0.E0	7.E0	5.E0
4.E0	-7.E0	-7.E0	3.E0
4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 37

1.E0	1.E0	3.E0	8.E0
5.E0	5.E0	-10.E0	-4.E0
-4.E0	-7.E0	3.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-14.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
-9.E0	6.E0	0.E0	0.E0
-3.E0	-3.E0	9.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 36

1.E0	3.E0	3.E0	4.E0
3.E0	3.E0	4.E0	-5.E0
-5.E0	-6.E0	-6.E0	-6.E0
-6.E0	-5.E0	3.E0	8.E0
0.E0	7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
2.E0	4.E0	-4.E0	-4.E0
-2.E0	-2.E0	6.E0	2.E0
2.E0	-5.E0	-5.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 39

1.E0	4.E0	4.E0	6.E0
10.E0	8.E0	5.E0	-7.E0
-7.E0	-3.E0	-3.E0	-5.E0
-5.E0	-8.E0	-8.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-10.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	11.E0	-9.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
-18.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-10.E0	-10.E0	0.E0	0.E0

0.E0	0.E0	5.E0	-13.E0
-13.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 40

1.E0	2.E0	2.E0	4.E0
4.E0	4.E0	6.E0	-3.E0
-3.E0	-3.E0	-3.E0	-3.E0
-3.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
5.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	6.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	6.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 41

1.E0	1.E0	1.E0	9.E0
3.E0	4.E0	5.E0	-3.E0
-3.E0	6.E0	2.E0	5.E0
5.E0	-7.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-7.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	2.E0
5.E0	5.E0	5.E0	5.E0
-7.E0	-7.E0	-7.E0	5.E0
5.E0	-2.E0	-2.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 42

1.E0	2.E0	2.E0	4.E0
3.E0	2.E0	4.E0	-6.E0
-6.E0	3.E0	3.E0	3.E0
4.E0	2.E0	-6.E0	0.E0
0.E0	0.E0	2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	3.E0
3.E0	-3.E0	-3.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
4.E0	3.E0	-3.E0	-3.E0
-4.E0	-4.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 43

1.E0	1.E0	1.E0	6.E0
4.E0	4.E0	7.E0	-7.E0
-7.E0	3.E0	3.E0	3.E0
3.E0	-6.E0	4.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	3.E0
6.E0	-4.E0	3.E0	-1.E0
-1.E0	6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	9.E0
-6.E0	-6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 44

1.E0	2.E0	1.E0	4.E0
3.E0	1.E0	5.E0	-2.E0
-2.E0	-3.E0	-3.E0	4.E0
4.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-1.E0

-1.E0	0.E0	0.E0	0.E0
0.E0	-9.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 45

1.E0	1.E0	1.E0	4.E0
2.E0	3.E0	4.E0	5.E0
3.E0	4.E0	2.E0	3.E0
5.E0	4.E0	4.E0	10.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	4.E0
4.E0	-2.E0	-2.E0	-2.E0
-2.E0	8.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	-13.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	9.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	9.E0	-4.E0	-4.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 46

1.E0	3.E0	3.E0	10.E0
5.E0	5.E0	5.E0	-1.E0
-1.E0	-6.E0	5.E0	5.E0
-6.E0	5.E0	-6.E0	0.E0
6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	8.E0
8.E0	2.E0	3.E0	3.E0
4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	2.E0
7.E0	-13.E0	4.E0	-6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 47

1.E0	3.E0	3.E0	4.E0
3.E0	3.E0	3.E0	-2.E0
-2.E0	-3.E0	-3.E0	-3.E0
-3.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	5.E0	2.E0	-5.E0
3.E0	3.E0	0.E0	0.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
-3.E0	-3.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 48

2.E0	1.E0	1.E0	6.E0
3.E0	4.E0	6.E0	-5.E0
-5.E0	-7.E0	6.E0	5.E0
5.E0	4.E0	-5.E0	0.E0
10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	-9.E0
4.E0	0.E0	0.E0	-5.E0
-5.E0	6.E0	-6.E0	2.E0
0.E0	0.E0	-4.E0	-4.E0
9.E0	-3.E0	-3.E0	0.E0
0.E0	0.E0	0.E0	3.E0
-9.E0	-9.E0	0.E0	0.E0
0.E0	0.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 49

1.E0	1.E0	1.E0	4.E0
3.E0	3.E0	-11.E0	-6.E0
-6.E0	-7.E0	3.E0	3.E0

6.E0	0.E0	0.E0	7.E0
7.E0	6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	6.E0
6.E0	-2.E0	-2.E0	-2.E0
-2.E0	5.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
-10.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 50

1.E0	0.E0	0.E0	7.E0
4.E0	4.E0	9.E0	-3.E0
-3.E0	4.E0	3.E0	-6.E0
5.E0	-1.E0	-1.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 51

1.E0	7.E0	7.E0	3.E0
-4.E0	3.E0	3.E0	-1.E0
-1.E0	0.E0	0.E0	-1.E0
-1.E0	-1.E0	-1.E0	9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	10.E0
-2.E0	-2.E0	0.E0	0.E0
0.E0	0.E0	7.E0	3.E0
3.E0	2.E0	2.E0	2.E0
2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 5&

1.E0	8.E0	6.E0	-2.E0
-2.E0	2.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 53

1.E0	3.E0	3.E0	4.E0
3.E0	3.E0	5.E0	5.E0
5.E0	-7.E0	3.E0	3.E0
2.E0	-5.E0	-5.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	3.E0
3.E0	-4.E0	-4.E0	-4.E0
-4.E0	4.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
-6.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	7.E0
3.E0	3.E0	-4.E0	-4.E0
-4.E0	-4.E0	7.E0	3.E0
3.E0	-4.E0	-4.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 54

1.E0	2.E0	3.E0	-6.E0
-6.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	2.E0	5.E0
5.E0	-2.E0	-2.E0	-2.E0
-2.E0	5.E0	4.E0	-7.E0
-3.E0	-3.E0	0.E0	0.E0
3.E0	7.E0	7.E0	-4.E0
-4.E0	-4.E0	-4.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	4.E0
4.E0	-5.E0	4.E0	-5.E0
-5.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 55

1.E0	1.E0	1.E0	-9.E0
3.E0	4.E0	5.E0	0.E0

0.E0	-6.E0	-6.E0	-5.E0
-5.E0	-4.E0	-4.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	-8.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
-8.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-11.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 56

1.E0	2.E0	1.E0	-5.E0
5.E0	4.E0	7.E0	0.E0
0.E0	-1.E0	-3.E0	3.E0
3.E0	-2.E0	-2.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-5.E0
4.E0	0.E0	0.E0	-1.E0
-1.E0	6.E0	-5.E0	-5.E0
0.E0	0.E0	0.E0	0.E0
6.E0	-5.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	-11.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 57

1.E0	1.E0	1.E0	6.E0
5.E0	5.E0	-7.E0	-1.E0
-1.E0	-3.E0	-3.E0	-3.E0
1.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	4.E0	4.E0
4.E0	-1.E0	-1.E0	-1.E0
-1.E0	8.E0	-3.E0	-3.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-9.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-1.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 58

1.E0	1.E0	1.E0	7.E0
5.E0	4.E0	-8.E0	-1.E0
-1.E0	-3.E0	-3.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	3.E0
3.E0	-1.E0	-1.E0	-1.E0
-1.E0	8.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	8.E0
-2.E0	-2.E0	0.E0	0.E0

0.E0	0.E0	-10.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 59

1.E0	4.E0	1.E0	-2.E0
-2.E0	3.E0	-5.E0	0.E0
0.E0	0.E0	0.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-1.E0
-1.E0	0.E0	0.E0	0.E0
0.E0	-7.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-7.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	3.E0	-4.E0
-4.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 60

1.E0	2.E0	2.E0	6.E0
2.E0	3.E0	3.E0	-6.E0
-6.E0	4.E0	7.E0	-9.E0
-9.E0	-9.E0	-9.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	6.E0
6.E0	6.E0	-3.E0	-3.E0
-3.E0	-3.E0	7.E0	6.E0
6.E0	-2.E0	-2.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 61

1.E0	1.E0	1.E0	4.E0
4.E0	6.E0	4.E0	-5.E0
-5.E0	-5.E0	2.E0	-5.E0
-5.E0	4.E0	2.E0	8.E0
0.E0	6.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	8.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	2.E0
6.E0	-9.E0	-3.E0	-3.E0
0.E0	0.E0	-11.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 62

1.E0	5.E0	2.E0	-6.E0
4.E0	4.E0	-7.E0	0.E0
0.E0	-2.E0	-2.E0	-5.E0
3.E0	0.E0	0.E0	0.E0

0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	6.E0	-3.E0
-3.E0	0.E0	0.E0	0.E0
0.E0	-10.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	-12.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	-12.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 63

1.E0	1.E0	1.E0	4.E0
2.E0	2.E0	5.E0	4.E0
-5.E0	5.E0	-7.E0	5.E0
5.E0	-7.E0	-7.E0	9.E0
0.E0	0.E0	0.E0	5.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
5.E0	0.E0	6.E0	3.E0

-5.E0	-2.E0	-2.E0	0.E0
0.E0	7.E0	-4.E0	2.E0
0.E0	0.E0	-2.E0	-2.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	5.E0
4.E0	4.E0	-2.E0	-2.E0
-2.E0	-2.E0	9.E0	-2.E0
-2.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0

SPECIMEN 64

1.E0	1.E0	1.E0	6.E0
6.E0	-12.E0	-12.E0	-6.E0
-6.E0	-6.E0	-6.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
0.E0	0.E0	7.E0	-7.E0
-7.E0	0.E0	0.E0	0.E0
0.E0	-14.E0	0.E0	0.E0
0.E0	0.E0	0.E0	0.E0
7.E0	-7.E0	3.E0	0.E0
0.E0	-4.E0	-4.E0	5.E0
-2.E0	-2.E0	0.E0	0.E0

0.E0	0.E0	-7.E0	0.E0	1 CARI
0.E0	0.E0	0.E0	0.E0	
0.E0	-5.E0	0.E0	0.E0	
0.E0	0.E0	0.E0	0.E0	3
				4*