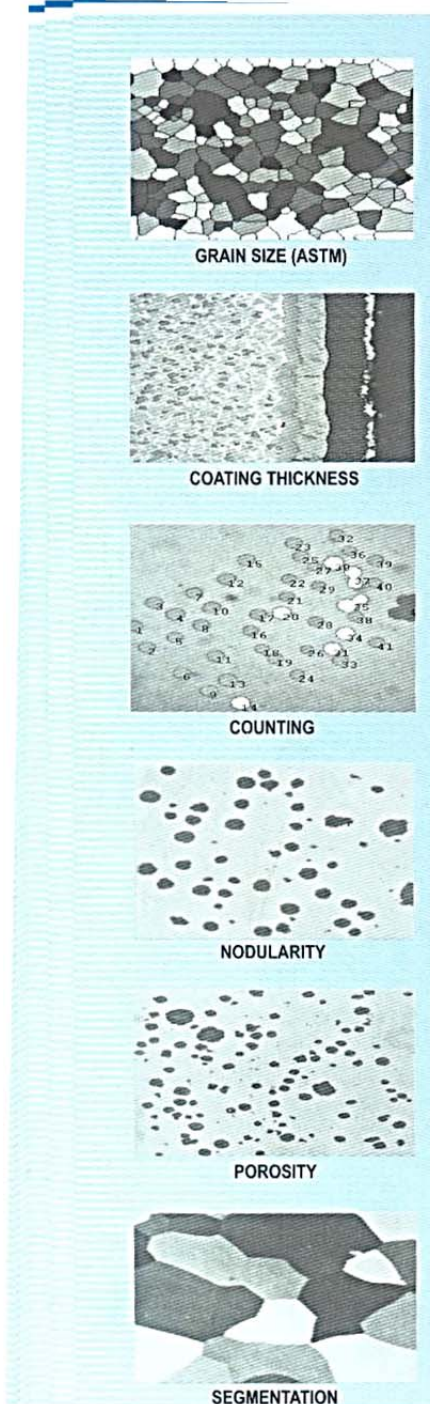


Metavision Metallurgical Software



ADVANCED METALLURGICAL SOFTWARE

METAPLUS-55, is an advanced Metallurgical Software compiled with the co-operation of **M/S Kyowa-Japan** & to suit a wide range of metallurgical applications with utmost accuracy in Metallurgical Analysis & Investigations. **Metaplus-55** is user friendly & very convenient other equivalent metallurgical software.

BASIC FUNCTIONS: Important Basic Functions include: -

- | | |
|--------------------------|-----------------------------|
| (A) Image Editing & View | (B) Morphometry Measurement |
| (C) Image Processing | (D) Routine Filters |
| (E) Special Filters | (F) Edge Detection. |

Detailed description of the above functions is provided in the manual.

TECHNICAL FEATURES: Metaplus-55 is suitable for a wide range of Image Analysis functions and the prominent functions are described hereunder: -

- 1. Calibration:** a) Special calibration, with Japanese test slide JIS (0.01mm)
b) Area by enclosed line controlled by four arrow keys available on keyboard arrow zoomed Preview.
 - 2. Count & Classification:** Identification of objects in an image, count them, obtain size features measurements. Objects identification by user or automatically. User can classify on basis of size and intensity.
 - 3. Threshold Practical Measurement:** Manual, Auto Bright And Auto Dark Methods to identify Intensity range defined object to be measured. Various calculations & measurements available for selected particle are: Dimensions, Area, Parameter feret, Length, thread diameter & fiber width.
 - 4. Morphometry Measurements:** Line measurements for Distance, length, Perimeter, Angle, Three point radius. Roundness, Shape, Orientation, Elongation Circular Diameter, Equal Sphere volume.
 - 5. Locational Analysis:** Centroid X, Centroid Y, Major X1, Major Y1, Minor X1, Minor X2, Major Y2, Minor X2, Minor Y2, Box X2, Box Y2 & Box Area.
 - 6. Phase Analysis:** Measure area fraction & volume fractions. Identify multiple phases within Micro structure. The analysis conform to ASTM standard E562 & E1245.SS
 - 7. Nodularity:** Measure Nodularity as per ASTM 247 standard. The Nodules & Flakes separated on the basis of its shape and aspect ratio. The detail measurement of each structure is available for further analysis. The processed image displays non-Nodularity in different color. The Nodules can be classify by its range on the basis of its size & shape.
 - 8. Porosity:** They are recognized as per ASTM B-276 standard. The measurement of pore is displayed. The image displays pores in **Red Color**.
 - 9. Coating Thickness:** This application rapidly measures the thickness or width of coating at multiple positions along a sample as per ASTM B487 Standards. The results are available for min/max and mean of width Measured at various points of sample section.
 - 10. Decarburisation:** Measured depth / width of decarburisation as per ASTM standards.
 - 11. Grain Size:** The module analysis Grain image and measure the Grain No & Grain Size using ASTM E 112 method. The option for measurement available are: -1. Manual Method 2. Popular comparison Method 3. Quick single Grain measurement 4. ALA method 5. Interception method. Various filters to make user defined templates. Grain boundary analysis mathematical function.
 - 12. Non-Metallic Inclusion:** Measure inclusions and report ASTM E-45, E-1245 non-metallic inclusion cumulative length width ratio.
 - 13. Graphic Flakes:** Graphite Flakes length, Width distribution and Percentage of Graphite ASTM A-247-67
 - 14. Report:** a) Direct printout with original image, processed image & Tabular results
b) Export to MS EXCEL for further modifications.
- "Metaplus-55", Advanced Metallurgical Software** is supplied with a protector & working manual for reference in use by the operator. **CODE- MET-5055**