

# THE AEC1107-VHT COMPUTERIZED VICKERS HARDNESS TESTING MACHINE

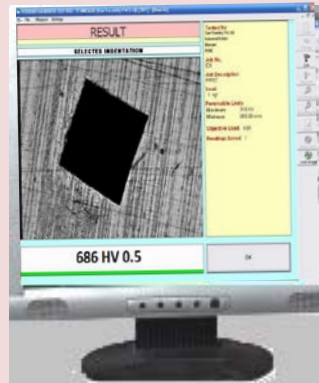
## PRODUCT DESCRIPTION:

THE AEC1107-VHT COMPUTERIZED VICKERS HARDNESS TESTING MACHINE measure hardness of quench hardened layer the surface coating layer, steel, non-ferrous metal and small and thin shape pans of varying dimensions & thickness from soft metal up to hardest etc. Fully automatic test cycle as per national and international standards like IS: 1754: 2002/ DIN EN ISO 6507-2: 1997 standards.

THE AEC1107-VHT COMPUTERIZED VICKERS HARDNESS TESTING MACHINE supplied with calibration certificates from NABL/GOVT ACCREDITED LABORATORY.

## PART NUMBER

AEC1107-VHT COMPUTERIZED VICKERS HARDNESS TESTING MACHINE



## FEATURE:

- Automatic motorized loading, dwelling and unloading.
- Load selection via unidirectional knob
- Manual height/ Z movement of stage with crank.
- Auto/ Manual positioning of turret (indenter and lens).
- Built-in printer with RS232 interface.
- Measurement scale Vickers Hardness (HV) and Knoop Hardness (HK).
- CCD camera with objectives attached to capture the Image & Transfer the same to display unit with software.



## SPECIFICATION:

- Test Loads (Kgf) : 1 to 30
- Test height (mm) : 85
- Depth of throat from centre of indenter(mm) : 135
- Dwell Time (Second) : 5-99
- Power Supply : 230 V (±10% AC), 50 Hz (± 1%), Single phase.

## **ACCESSORIES:**

- Vickers Diamond Indenter.
- Vickers standard blocks.
- 10X and 20X Magnification objectives.
- Flat anvil 50/100 mm dia.
- V' type anvil.
- Leveling vice for odd/ irregular shaped components
- Holder for holding thin sheet 0.1 to 5 mm
- Clamping vice for upto 40 mm sample.
- Spirit Level indicator
- Supply/ Power cord.
- Compatible PC with window 10 software, Printer and UPS.
- PC interface and USB deviance,
- Vickers data transfer and image analysis software CD/ DVD.
- Accessory box with standard tool like spanner, L-key, Screw driver etc
- Dust Cover.
- Foundation table.
- Operational, instructions and maintenance manual in English with mechanical, electrical & electronic system diagrams and component test certificates in hard and soft copies.

## **HIGH RESOLUTION CCD CAMERA WITH INTELLIGENT MEASURING IMAGING SOFTWARE**

It is multifunctional & User friendly software. It is a menu driven and advanced window7/8/10 based software capable of following features:

- Measurement of impression via Automatic and Manual.
- Data storage and reports generating options are available for analysis
- Advanced image processing algorithms implemented for precise calculation of hardness number with various options to cover all ranges of specimen.
- Auto Measurement of hardness without any manual draw of length.
- Batch file processing for data/storage and reports generation for case depth analysis etc.
- Statistical evaluation multiple no of tested indentation and data with entry of specimen ID, specimen description, operator ID, date and time of testing etc.
- Entry and reporting of multiple specimen data and results in tabular form.
- Software for calculating average, standard deviation, mean, coefficient of variation, max/min value, median, frequency distribution graph, variation graph etc.
- Calibration mode for calibration / verification on PC monitor.
- Windows' s based graphical user interface.
- Security with user login and calibration process passwords protected.
- Database of test result to recall of test results and report generation facility in pdf format including stored curves.

# COMPUTERISED OPERATION

## THE DATA BASE STARTS TO LOAD

- Enter a Name and Address.
- Enter a Password.
- Click DONE.



The dialog box titled "Opening At First Time" contains the following fields and sections:

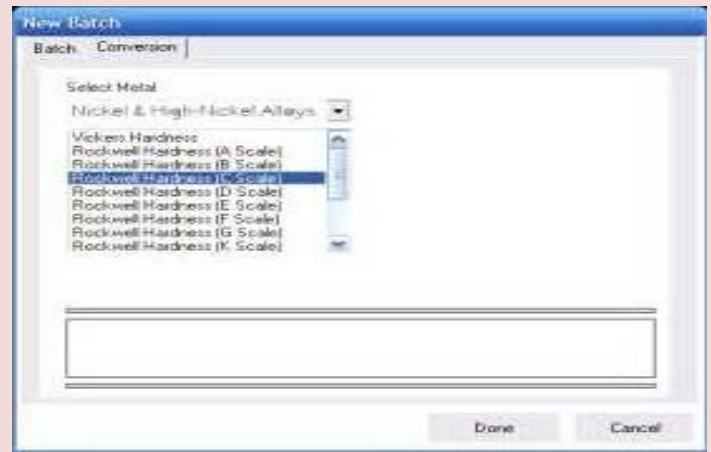
- Company** section:
  - Name: [Text Input]
  - add: [Text Input]
  - Address & Telephone: [Text Input]
- Password** section: [Text Input]
- Retype Password** section: [Text Input]
- Done** button at the bottom right.

## NEW BATCH FILE



The "New Batch" dialog box is divided into several sections:

- Tested For:** Name & Address: [Text Input]
- Test Parameters:** Test Load: [Dropdown] kgf; Ball Diameter: [Dropdown] mm; Limits: [Text Input]; Maximum: [Text Input]; Minimum: [Text Input]
- Certificate Data:** Certificate No.: [Text Input]; Date: [Text Input];  Hardness Conversion
- Sample Data:** Job No.: [Text Input]; Job Description: [Text Input];  Each Job id. required
- Buttons:** Done, Cancel

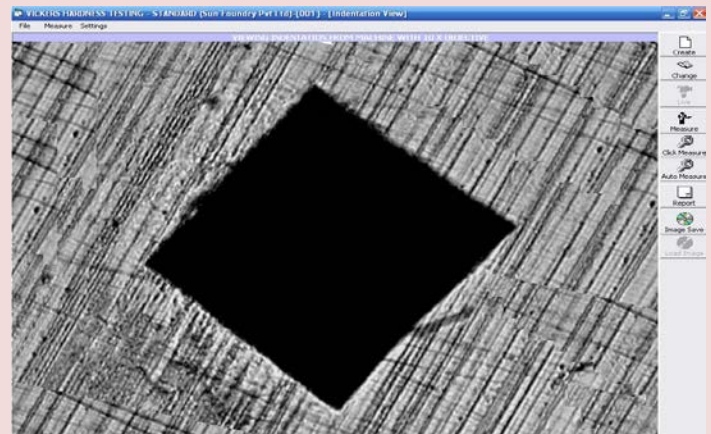


This view of the "New Batch" dialog box shows the "Select Metal" dropdown menu open, listing various metal types and their corresponding hardness scales:

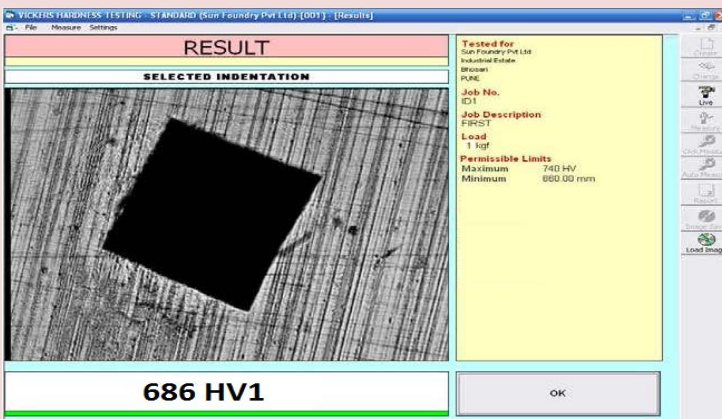
- Nickel & High-Nickel Alloys
- Vickers Hardness
- Rockwell Hardness (A Scale)
- Rockwell Hardness (B Scale)
- Rockwell Hardness (C Scale)
- Rockwell Hardness (D Scale)
- Rockwell Hardness (E Scale)
- Rockwell Hardness (F Scale)
- Rockwell Hardness (G Scale)
- Rockwell Hardness (K Scale)

Buttons: Done, Cancel

## MAIN WINDOW/ IMAGE CAPTURING WINDOW









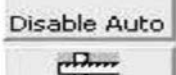
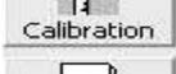

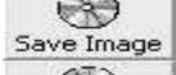
## IMAGE CAPTURING VIEW AND RESULTS



The "RESULT" dialog box displays the following information:

- RESULT** header
- SELECTED INDENTATION** header
- Tested For:** Sun Foundry Pvt Ltd; Industrial State; Process: PDC
- Job No.:** ID1
- Job Description:** FIRST
- Load:** 1 kgf
- Permissible Limits:** Maximum: 740 HV; Minimum: 686.00 mm
- Image:** A micrograph showing a black square indentation on a metal surface.
- Result:** 686 HV1
- Buttons:** OK

## **TOOL BAR/ FEATURE:**

|   |   |  |
|---|---|--|
|  | ⇒ | To create new batch.                       |
|  | ⇒ | To open previous entered batches.          |
|  | ⇒ | To open view window.                       |
|  | ⇒ | For manual mode of measurement.            |
|  | ⇒ | For auto mode of measurement.              |
|  | ⇒ | To enable remote auto measurement.         |
|  | ⇒ | For Calibration and check the calibration. |
|  | ⇒ | To view report.                            |
|  | ⇒ | To save image to bitmap file.              |
|  | ⇒ | To load image from file                    |



An ISO 9001-2015 Certified Company  
ASHIAN, 831, WESTEND MALL DISTRICT CENTRE, JANAKPURI, NEW DELHI-110058  
PH: 91 11 65442859, 9871112859 FAX: 91 11 25542160 MOBILE NO: 91 9212112859  
E-MAIL: [info@ashianengineers.com](mailto:info@ashianengineers.com) [www.ashianengineers.com](http://www.ashianengineers.com),  
[www.ashianecom.com](http://www.ashianecom.com)