

Standard Operating Procedure

Struers DuraJet Hardness Tester

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School:	Engineering	Campus:	Waurrn Ponds	Location:	KE2.101
Date Prepared	04/01/2019	Date to be Reviewed:	04/01/2020		
Category Rating:	Specific Training Required				

SCOPE & PURPOSE:

The purpose of this SOP is to show students, researchers and staff how to operate the hardness tester safely.

TRAINING REQUIREMENTS:

User will have completed Level 1 online and Level 2 materials labs inductions, and need to be trained by technical staff in a level 3 induction. Before using this equipment, required safety documentation must be completed and signed off by the technical staff and the user's supervisor.

POTENTIAL HAZARDS/HEALTH EFFECTS:



Crushing, stabbing, and puncturing by coming into contact with moving parts.

MANDATORY CONTROLS:

- ✓ Safety Glasses
- ✓ Enclosed Footwear
- ✓ Training
- ✓ Safety stop button
- ✓ Project Safety Assessment

Precaution Requirements:

DO NOT USE AFTERHOURS (OUTSIDE OF MON – FRI 8AM – 6PM) WITHOUT TECHNICIAN AUTHORISATION.

- Refrain from testing unknown materials. Refer to available standards and datasheets for choosing the correct hardness method and testing parameters.

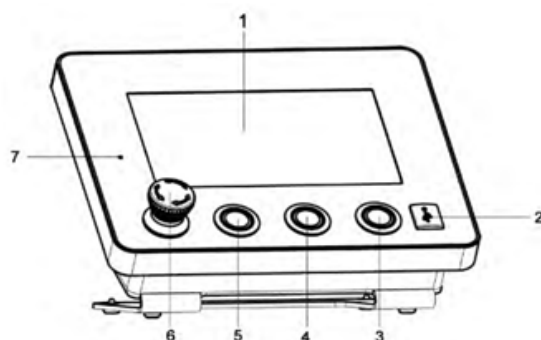
INSTRUCTIONS:

Booking Procedure: must have a booking in the Outlook Calendar *G SEBE ENG Lab Eqmpt KE2.101 Rockwell Hardness Tester (even if free and available).

Pre-Start check:

- Check to see which indenter is installed. Seek technician assistance if indenter requires changing.
- Familiarise yourself with the control unit (figure 1).

The control unit has the following controls:



- 1 Touch screen
- 2 USB connection
- 3 "Start Testing" button
- 4 "Nose Cone Down" button
- 5 "Nose Cone Up" button
- 6 EMERGENCY OFF button
- 7 LED indicator lamp

To operate the touch screen, you can touch the buttons with your finger

Figure 1: Controls of the Rockwell/Brinell Depth Hardness Tester.



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Operation: For additional information on how to perform these tasks consult the manual.

- Turn power on at the wall and turn instrument power on using the button at the left rear of the instrument.
- Use the controls to move the indenter arm a safe distance to allow mounting of the sample.
- Place sample on the stage underneath the indenter.
- Clear the result history.
- Setup electronic saving of data if required (plug in your USB drive to the control unit).
- Select the specimen method.
- Select the test method.
- Go to the “Test” page and lower the stage until the sample is clamped – the indenter will automatically lower and indent your sample once it’s clamped and produce the result.
- Record the measured hardness value if you are not saving the data electronically via your USB drive.

After Use:

- Raise the indenter arm to the indicator and remove your sample.
- Remove your USB drive.
- Turn off the instrument.

GENERAL CARE & MAINTENANCE:

- Protect from dust and dirt.
- Ensure anvil is lubricated with oil.
- Use only special cleaning products to clean LCD screen.

REPAIRS & CERTIFICATION/VALIDATION SCHEDULE:

Reporting faults/concerns of equipment procedure: Technical Staff.
The instrument is serviced and calibrated by the supplier annually.

SPILLS/ ACCIDENT REPORTING PROCEDURE:

Report spills/incidents to: Technical Staff.

In case of Emergency:

- Use safety stop button.
- Contact Technical Staff.
- If a serious injury has occurred call 000.
- Alert others if nearby.
- Evacuate to closest assembly area.