NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

DEPARTMENT OF Metallurgical & Materials Engineering

REPORT

TITLE High stress abrasive wear behaviour study upto a sliding distance of 75m

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Section – Year 4th (2023)

Signature

Date of Experiment 14/8/2023

Title:

Study of high stress abrasive wear behaviour of steels

Aim:

High stress abrasive wear behaviour upto a sliding distance of 75 m

Theory:

As discussed previously

Procedure:

As discussed previously

Observation and calculation:

Initial weight = 71.8265 g

Final weight = 71.8060 g

Weight loss = (71.8265 − 71.8060) g = 0.0205 g

$$\text{Wear rate} = \frac{\text{Volume Loss}}{\text{Sliding distance}} = \frac{0.0205\ g}{7.8\ g/cm^3 \times 75\ m}$$

$3.5 \times 10^{-5}\ cm^3/m$

$3.5 \times 10^{-11}\ m^3/m$

Result:

Weight loss is 0.0205 g and wear rate is 3.5×10^{-11} m

Date 14/8/2023

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