

For Restricted Circulation only

 SHAKAMBHARI GROUP #SteelWithin		SHAKAMBHARI ISPAT & POWER LTD. (Formerly known as Ess Dee Aluminium Ltd.)	
STANDARD TEST METHOD			
Title: Ash Content (%) of Roll Coolant Oil			Page No. 1 of 2
STM No.	Version No.	Effective Date	Next review date
SIPL/STM/018	00	06.07.2026	05.07.2028

1.0 PURPOSE

1.1 To determine the ash content (%) of roll coolant oil.

2.0 SCOPE

2.1 This STM is applicable to the determination of the ash content (%) of roll coolant oil used in the Rolling Mill section of Shakambhari Ispat & Power Ltd.

3.0 REFERENCE(S) & ATTACHMENTS**3.1 References**

3.1.1 In-house

3.2 Attachments

3.2.1 Nil

4.0 RESPONSIBILITY**4.1 Quality Control Department / Chemist:**

4.1.1 To carry out the test as per this procedure and to record the results.

4.2 Quality Assurance Head:

4.2.1 To ensure the implementation of the defined system.

4.3 Plant Head:

4.3.1 To ensure the implementation of the defined system.

5.0 DISTRIBUTION

5.1 Quality Assurance

5.2 Quality Control

6.0 DEFINITION(S) & ABBREVIATION(S)**6.1 Definitions**6.1.1 **Ash Content:** The inorganic residue remaining after the oil sample has been ignited at high temperature, expressed as a percentage by weight of the sample taken.**6.2 Abbreviations**

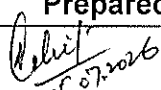
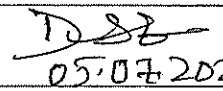
6.2.1 STM – Standard Test Method

6.2.2 QA – Quality Assurance

6.2.3 QC – Quality Control

6.2.4 °C – Degree Celsius

6.2.5 gm – Gram

Prepared By:	Checked By:	Approved By:
 05.07.2026	 05.07.2026	 05.07.2026

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7.0 PROCEDURE**7.1 Materials and Equipment**

- 7.1.1 Crucible
- 7.1.2 Hot plate oven
- 7.1.3 Analytical balance, capacity 200 gm (readability of 0.01 mg)
- 7.1.4 Electrical Muffle furnace, temperature up to 1200°C (readability of 1°C)
- 7.1.5 Desiccators
- 7.1.6 Approx. 20 to 25 grams testing sample

7.2 Method

- 7.2.1 Take 1 no. of crucible.
- 7.2.2 Take the weight of the empty crucible and record it as the initial weight. Add 20-25 grams of the sample, then weigh again and record it as the final weight. Subtract the initial weight from the final weight and record the difference as the sample (oil) weight (B).
- 7.2.3 Place the crucible in the muffle furnace with the temperature controlled at 800°C for 1 hour.
- 7.2.4 After 1 hour of heating, place the crucible into the desiccators for cooling purpose, then record the weight of the dry crucible (C).

7.3 Result / Calculation

- 7.3.1 Calculate the ash content (%) using the following formula:
- 7.3.2 **Ash Content (%) = [(Dry Crucible (C) – Empty Crucible (A)) / Sample Oil (B)] × 100**
- 7.3.3 Where: A = Weight of empty crucible; B = Weight of sample oil; C = Weight of dry crucible after ashing (crucible + ash).

7.4 Environmental Concern

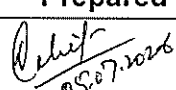
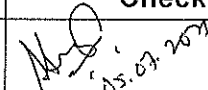
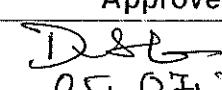
- 7.4.1 After completion of the test, clean the crucible.

7.5 Safety Concern

- 7.5.1 Wear gloves while the testing is conducted.

8.0 REVISION HISTORY

Revision No.	00	Effective Date	06.07.2026	CC No.	NA
Details of revision: New SOP					

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 05.07.2026	 05.07.2026	 05.07.2026