

For Restricted Circulation only

 SHAKAMBHARI GROUP #SteelWithin		SHAKAMBHARI ISPAT & POWER LTD. (Formerly known as Ess Dee Aluminium Ltd.)	
STANDARD OPERATING PROCEDURE			
Title: Operation for Universal Foil Mill (1200 mm)			Page No. 1 of 3
SOP No.	Version No.	Effective Date	Next review date
SIPL/PDI/002	00	06.07.2026	05.07.2028

1.0 PURPOSE

- 1.1 To describe the standard procedure for safe and efficient operation of the Universal Foil Mill (1200 mm) for reducing aluminium strip thickness to the required foil gauge while ensuring product quality, machine safety, and operator safety.

2.0 SCOPE

- 2.1 This SOP applies to Production Department.

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

- 3.1.1 In-house

3.2 Attachments

- 3.2.1 Attachments: Production logbook: SIPL/PDI/002/F01/00

- 3.2.1 Attachments: Cleaning Record: SIPL/PDI/002/F02/00

4.0 RESPONSIBILITY**4.1 Production Department Person**

- 4.1.1 To prepare the SOP.

4.2 Production Head

- 4.2.1 To ensure the training of the SOP to all concerned personnel involved in implementation of the SOP.

- 4.2.2 To ensure the implementation of the SOP after training.

4.3 Quality Assurance Person

- 4.3.1 To check the SOP and to maintain the original copy of the SOP.

- 4.3.2 To issue the controlled copy of the SOP and maintain its issuance record.
To retrieve the controlled copy of the SOP when it is superseded/obsolete and maintain its record.

4.4 QA Head / Plant Head

- 4.4.1 To approve new or revised SOP.

- 4.4.2 To ensure the implementation of the defined system.

5.0 DISTRIBUTION

- 5.1 Quality Control

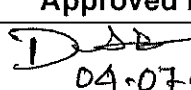
- 5.2 Production

6.0 DEFINITION(S) & ABBREVIATION(S)**6.1 Definitions**

- 6.1.1 Nil

6.2 Abbreviations

- 6.2.1 Nil

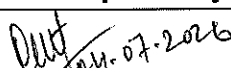
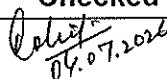
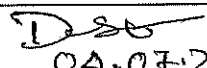
Prepared By:	Checked By:	Approved By:
 04.07.2026	 04.07.2026	 04.07.2026

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7.0 PROCEDURE**7.1 Standard Operating Practice**

- 7.1.1 Ensure the machine parts and all entry- and exit-side transfer rolls are clean.
- 7.1.2 Ensure all drives, decoiler, recoiler, CO₂ safety system, water pump, air compression, fumes exhaust and mill drive are healthy.
- 7.1.3 Start the gear box (approximately 35 °C).
- 7.1.4 Start the roll coolant filtration system and feed pump system.
- 7.1.5 Start LP / HP / GB lubrication circuits.
- 7.1.6 Bring the push-up pressure to a minimum of 30 bars.
- 7.1.7 Once the temperature of the oil reaches 40 °C, start threading the mill with continuous coolant supply to the mill.
- 7.1.8 JOB cards are given to the operators, which give the permission and identification of the planned job to start.
- 7.1.9 Enter the Work Roll according to the planning, and Roughness (Ra), Camber and Diameter should be entered in the Log Book..
- 7.1.10 Start the calibration and warm-up.
- 7.1.11 Load the coil on the entry side onto the depositor and clamp it in the decoiler.
- 7.1.12 Load onto the empty spool on the recoiler.
- 7.1.13 Load the empty spool on the recoiler and clamp it.
- 7.1.14 Feed the coil to the roll bite with the help of foil feeding and take-in bridle rolls in thread mode, then wrap the coil at the recoiler at threading speed.
- 7.1.15 Set tension at the decoiler and recoiler, start the X-ray gauge, release oil through the nozzle, and start the machine in run mode for the desired output gauge.
- 7.1.16 Check the oil parameters and enter all parameters in the system (pressure / tension / bending / tilting / speed / oil flow rate / specification).
- 7.1.17 Set the edge trimmer as per requirement.
- 7.1.18 Set the desired gauge in the thickness controller monitor and start rolling as per the following pass schedule:

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Gauge (Micron)	Tolerance	Pass Schedule as per micron
60	± 5 %	300 → 135 → 66 → 60
40	± 5 %	300 → 140 → 70 → 40 (Pack Roll)
30	± 5 %	300 → 150 → 90 → 52 → 30 (Pack Roll)
25	± 5 %	300 → 150 → 85 → 42 → 25 (Pack Roll)
20	± 5 %	300 → 150 → 68 → 32 → 20 (Pack Roll)
18	± 5 %	300 → 150 → 70 → 32 → 18 (Pack Roll)
12	± 5 %	300 → 150 → 90 → 42 → 24 → 12 (Pack Roll)
9 / 10	± 5 %	300 → 160 → 80 → 40 → 19 → 9 (Pack Roll)

- 7.1.19 Give a sample for quality check at the starting and end.
- 7.1.20 Surfaces of the web are to be checked for any roll mark, dent, pin holes, oil carry and gauge, and inform QC for confirmation.
- 7.1.21 In case of any abnormality, inform the Shift In-charge.
- 7.1.22 De-clamp the coil from the recoiler and transfer it to the deposit using the coil car. From there, unload using a crane and store on iron rails / skids or on input deposits as per program.
- 7.1.23 De-clamp the empty spool from the decoiler and transfer it using the spool transfer system.
- 7.1.24 After finishing, put identification on the coil surface and maintain all records.

8.0 REVISION HISTORY

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

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