

For Restricted Circulation only

 SHAKAMBHARI GROUP #SteelWithin		SHAKAMBHARI ISPAT & POWER LTD. (Formerly known as Ess Dee Aluminium Ltd.)	
STANDARD OPERATING PROCEDURE			
Title: Operation for Shellac Machine			Page No. 1 of 3
SOP No.	Version No.	Effective Date	Next review date
SIPL/PDS/005	00	06.07.2026	05.07.2028

1.0 PURPOSE

- 1.1 To define the standard procedure for preparation of Shellac solution for the coating / lamination process.

2.0 SCOPE

- 2.1 This SOP is applicable for Production Department.

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

- 3.1.1 ISO 15378:2017

3.2 Attachments

- 3.2.1 Attachments: Reference SOP No. SIPL/PDI/006

4.0 RESPONSIBILITY**4.1 Production Head**

- 4.1.1 To ensure the training of the SOP to all concerned department personnel involved in implementation of the SOP.
 4.1.2 To ensure the implementation of the SOP after training.

4.2 Quality Assurance Person

- 4.2.1 To check the SOP.
 4.2.2 To maintain the original copy of the SOP.
 4.2.3 To issue the controlled copy of the SOP.
 4.2.4 To maintain the issuance record of the SOP.
 4.2.5 To retrieve the controlled copy of the SOP when it is superseded/obsolete and maintain its record.

4.3 QA Head

- 4.3.1 To approve new or revised SOP.
 4.3.2 To ensure the implementation of the defined system.

4.4 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 Production
 5.2 Quality Assurance

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

- 6.1.1 Nil

6.2 Abbreviations

- 6.2.1 Nil

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Samrat Banerjee 04.07.2026	Polish 04.07.2026	D. S. S. 04.07.2026

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7.0 PROCEDURE**7.1 Raw Materials**

Material Name	Quantity
Reducer	200 to 220 Ltr
Shellac Chips	3 Kg to 4 Kg

7.2 Equipment Required

7.2.1 Mixing Tank / Mixing Machine.

7.3 Safety PPE

7.3.1 Safety gloves

7.3.2 Mask

7.3.3 Safety shoes

7.3.4 Safety Cap

7.4 Method

7.4.1 Ensure the mixing machine and tank are clean and free from any previous material residue.

7.4.2 Wear all required PPE before starting the operation.

7.4.3 Charge 200-220 Kg reducer into the mixing tank.

7.4.4 Start the mixer machine at normal operating speed.

7.4.5 Slowly add 3-4 Kg shellac chips into the reducer during continuous stirring.

7.4.6 Continue mixing for approximately 2.3 to 3 hrs until the shellac chips are completely dissolved and a uniform solution is obtained.

7.4.7 After completion of mixing, filter the foil wash and store the pure foil wash in another drum.

7.4.8 Record batch details, mixing time and operator name in the logbook.

7.5 Area Line Clearance

7.5.1 Once the job is finished, stop the machine from run mode and switch to idling mode at the speed of 30 rpm.

7.5.2 Open the shellac machine container cover by rotating the screw.

7.5.3 Pour solvent on the container from the rotor blade side.

7.5.4 Check that the rotor blade is clean and clean all the container properly, ensuring no shellac remains in the container.

7.5.5 Stop the machine from idling mode.

7.5.6 Remove shellac from the shellac tank and shellac chief, and put the sign for line clearance.

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7.6 Responsibility7.6.1 **Operator:** Material changing and mixing operation.7.6.2 **Production Executive / Officer:** Process monitoring and verification.**8.0 REVISION HISTORY**

Revision No.	00	Effective Date	06.07.2026	CC No.	N/A
Details of revision: New SOP					

Prepared By:	Checked By:	Approved By:
<i>Samrat Banerjee</i> 04.07.2026	<i>[Signature]</i> 04.07.2026	<i>[Signature]</i> 04.07.2026