


| INTER PLANT STANDARD IN STEEL INDUSTRY | | |
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|  IPSS | METHOD OF STORAGE OF FLAT PRODUCTS | IPSS: 3-02-010-18 |
| | Corresponding IS does not exist | Formerly : IPSS: 3-02-010-18 |

0. FOREWORD

0.1 Interplant standardization in steel industry was initiated under the aegis of the Indian Standards Institution (ISI) and the Steel Authority of India Limited (SAIL). This IPSS was prepared by the standard committee on Operation and Maintenance, IPSS 3:2 and firstly published in 1997. Lastly, this has been revised by the standard committee in July 2018 with the active participation of the representatives from major Indian steel plants and leading consultants.

1. SCOPE

1.1 This Inter Plant Standard Specification enumerates the method of storage of finished products like Hot Rolled Coils, Hot Rolled Plates, Hot Rolled Sheets, Cold Rolled Coils, Cold Rolled Sheets, covering their identification, marking, stacking and record keeping.

2. IDENTIFICATION AND MARKING

2.1 **General** – Following general practice shall be followed during marking and identification.

2.1.1 Only English alphabets and Hindu-Arabic numerals (like 1, 2, 3,.....) shall be used.

2.1.2 The size of alphabets and numbers shall be between 50 mm – 100 mm.

3. HANDLING

3.1 Hot Rolled Coils

3.1.1 The size, coil number and weight of the coil with grade and other details (like Product destination etc., Bar Code Sticker may be used for avoiding loss of identification of the material shall be written at the coiler / conveyor of Hot Strip Mill.

3.1.2 All the coils shall be strapped circumferentially at the coiler / conveyor. Wherever, it is possible to eye strapping is to be done at coiler /conveyor procedure.

3.1.3 Different categories of hot rolled coils (i.e. for shearing for shipment and for CRM, etc.) shall be stored in their respective zones.

- 3.1.4 Separate area shall be earmarked for storing of defective or non-identified coils with proper identity.
- 3.1.5 All the HR coils shall be handled with tongs/C-hooks by EOT Cranes and kept in eye vertical/horizontal position in the yard. While handling the coil with single tong/C-hook, the tong shall be put in such a fashion that the jaw of the tong is just near the head end of the coil to avoid opening of lap. C-hook shall be designed to avoid high damage of HR coils .
- 3.1.6 Coil shall be kept single /multi stack high. For space constraint, if double handling is unavoidable, only thicker gauge shall be kept two high. However, care shall be taken to ensure that hot coils are not kept over cold coils.

3.2 **Hot Rolled Plate & Sheet**

- 3.2.1 After shearing the top sheet of the packet shall be marked with coil number and grade, size and other details. Bar Code Stickers to be used for avoiding loss of identification.
- 3.2.2 The HR plate and sheet packets shall be handled with alloy steel chains / nylon belts by EOT cranes edge protections may be used to avoid damage of edges. The slings shall be put in such a fashion that the packet is in balanced condition and there is no sagging of the packet. Wooden scantlings should be provided in between the packets so that they remain in horizontal condition. Edge protectors may be used to avoid damage of edges during handling.
- 3.2.3 HR plates and sheets processed in shearing line shall be stored in separate yards. (I.e. plate yard, sheet yard, LPG yard, etc.)
- 3.2.4 All plates shall be marked online with all details as per requirement to avoid mix up and easy traceability.

3.3 **Cold Rolled Coils**

- 3.3.1 The coils produced at SPM shall be provided with one strapping circumferentially and one strap through eye.
- 3.3.2 The coil number, size and weight shall be written on the outer/inner eye lap of the coil and a sticker to be put at eye/outer lap on the coil for better identification.
- 3.3.3 The coils for shearing / slitting shall be marked as SSL and S/L and transported to the respective areas.
- 3.3.4 Coils for direct shipment produced from two SPMs shall be transferred and be kept in the area earmarked for coil shipment.
- 3.3.5 Special grade steel coils meant for metal packaging shall be transported to the respective packaging areas by EOT Cranes.

4. **STORAGE**

- 4.1 All the coils shall be stored after proper packaging.
- 4.2 Standard packaging methods as indicated in packaging manuals shall be followed.

5. **MARKING**

- 5.1 **Bare Coil** – Coil number, Part No., size and weight of the coil shall be marked on the outer lap/eye of the coil by hot chalk. A sticker bearing the same information shall also be placed on the outer lap/eye. Edge marking of the coils with all details shall be done to avoid loss of identity.
- 5.2 **Packed Coil** – The identity of the coil shall be written by paint on the outer lap of the coil. Two numbers of metal tags having the same information shall be attached to one of the circumferential strapping (i.e. one on the outer layer and one on inside the eye).
- 5.3 **Cold Rolled Sheet**
- 5.3.1 The packets after shearing shall be marked with Pile No., size and grade and a sticker to be put on the top sheet of the packet having the identical marking. All Galvanised, Plain & Corrugated Sheets shall be marked online for better traceability.
- 5.3.2 These shall be lifted with sheet packet lifters and kept on specially prepared edges for packing as indicated in the packing manual.
- 5.3.3 The top sheet of the packet shall be provided with a sticker having size, weight, grade and coil number.
- 5.3.4 Metal tag shall be attached to one of the longitudinal strap and also in the lateral strap.
- 5.3.5 The packets after being packed shall be stacked size wise and grade wise.
- 5.3.6 The packet size shall be as per the weight requirement of the customer.

6. **DOCUMENTATION**

- 6.1 All documents shall be maintained in SAP / Level- III system. Hot Rolled Coil Finishing
- 6.1.1 Details of the coil received from HSM shall be recorded in the SAP online / Data Management System.
- 6.1.2 Details of these coils shall be entered from Production Report of HSM.
- 6.1.3 The coils are deleted from the Master Register after it is processed and despatched to outside customers.
- 6.2 **Cold Rolled Coils / Sheet**
- 6.2.1 The coils processed in finishing lines shall be entered in Inspection Report and Master Register.
- 6.2.2 The contents (CR Coil / CR Sheet) shall be verified from the Railway tally sheet. At the time of loading the details shall be entered in tally sheet after checking tally sheet Despatch Advice (DA) shall be prepared.
- 6.2.3 As per the tally sheet, Despatch Advice shall be prepared and shall be handed over to Process Control, PPC, Traffic and Sales Coordination for onward action.

7. **UPDATING**

- 7.1 Whenever computerization of storage yard is available, details with respect to heat number, quality, size source and location shall be kept in the computer. This shall be updated regularly.
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