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IS 7155-8 (1994): Code of recommended practice for conveyor safety, Part 8: Flight conveyors (scraper conveyors) [MED 6: Continuous Bulk Conveying, Elevating, Hoisting Aerial Ropeways and Related Equipment]



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IS 7155 (Part 8) : 1994

भारतीय मानक

वाहक सुरक्षा के लिये सिफारिशी रीती की संहिता

भाग 8 उड़ान वाहक (स्क्रैपर वाहक)

(पहला पुनरीक्षण)

Indian Standard

CODE OF RECOMMENDED PRACTICE FOR
CONVEYOR SAFETY

PART 8 FLIGHT CONVEYOR (SCRAPER CONVEYOR)

(*First Revision*)

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FOREWORD

This Indian Standard (Part 8) was adopted by the Bureau of Indian Standards after the draft finalized by the Continuous Bulk Conveying, Elevating, Hoisting, Aerial Ropeways and Related Equipment Sectional Committee, HMD 06 had been approved by the Heavy Mechanical Engineering Division Council.

There are two main variations of flight conveyors (scraper conveyors):

- 1) Conveyors with raised flights where the flight bar's level is above the material level. These conveyors work on purely dragging action of the chain to overcome the frictional drag between load and trough during conveyance.
- 2) Conveyors with submerged profile flights. In these type of conveyors, the conveyance of material is 'enmasse' which is due to the fact that the submerged flights, cutting their way through the material in which they are embedded, encounter a resistance that is greater than the frictional resistance of the material in contact with the bottom and the side of the trough.

In both cases screw take-ups are used for tensioning the chain.

These types of conveyors generally handle free flowing, granular, powdered or sorted material in small lumps. These shall be used with caution for any material that is sticky, abradable, corrosive, wet or containing large lumps.

IS 7155 was first published in 1974 as code of practice for conveyor safety. Based on the experience gained in the field and to incorporate more specific safety requirements for various types of conveyors, IS 7155 was revised.

This part of the standard is one of the series of Indian Standards Code of recommended practice for conveyor safety. The other parts of the standard are:

- Part 1 General information
- Part 2 General safety requirements
- Part 3 Belt conveyors and feeders
- Part 4 Vibrating conveyor/feeder
- Part 5 Apron conveyors/apron feeders
- Part 6 Selection, training and supervision of operators
- Part 7 Inspection and maintenance

In the preparation of this standard, assistance has been derived from AS CZ 15-1971 'SAA Conveyor safety code' issued by Standards Association of Australia.

*Indian Standard***CODE OF RECOMMENDED PRACTICE FOR
CONVEYOR SAFETY****PART 8 FLIGHT CONVEYOR (SCRAPER CONVEYOR)***(First Revision)***1 SCOPE**

This standard covers specific safety requirements for flight conveyors (scraper conveyor). These requirements are in addition to the general information and general safety requirements given in IS 7155 (Part 1) : 1986 'Code of recommended practice for conveyor safety : Part 1 General information' and IS 7155 (Part 2) : 1986 'Code of recommended practice for conveyor safety : Part 2 General safety requirements' respectively.

2 SPECIFIC SAFETY REQUIREMENTS

Besides statutory and other requirements relating to safety in general, specific safety requirements shall be observed at the following stages:

- a) During the construction stage (design and manufacture);
- b) During the installation stage (design, commissioning and entry into service); and
- c) During the utilisation stage (operation and maintenance).

2.1 During the Construction Stage (Design and Manufacture)

2.1.1 At the design and construction stage, among other parameters, capacity, speed of the flight, the pull on the chains and the power requirements for propulsion shall be given due consideration. These parameters shall be carefully selected and worked out.

2.1.2 The selection of chain, design and fabrication of casing, sprocket and the other functional components shall be done suitably keeping in view the respective duty factors.

2.2 During the Installation Stage (Design, Commissioning and Entry into Service)

2.2.1 As the chain (namely the pulling members) shall constantly be rubbing on the casing, renewable liners shall be provided for replacement in case of excessive wear.

2.3 During the Utilisation Stage (Operation and Maintenance)

The material fed into the conveying system shall be regulated as per the pre-determined quantities.

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