

Department of Civil Engineering

Technical Specifications for Pendulum Skid Resistance Tester

The specifications are divided into: (i) Equipment features, (ii) Technical requirements, (iii) Accessories, and (iv) Safety features

Equipment Features

1. The Pendulum Skid Resistance Tester must be capable of measuring the frictional resistance between a rubber slider mounded on the end of a pendulum arm and the test surface
2. The tester must be capable of evaluating the skid resistance of the surface in both wet and dry surface conditions
3. The tester must be portable and capable of measuring the skid resistance of laboratory specimens and field surfaces
4. The tester must be capable of testing the concrete pavements, bituminous pavements, pedestrian walkways and paver blocks and paver stones
5. The tester must be capable of testing the aggregates in the Polished Stone Value test

Technical Requirements for Pendulum

1. The skid resistance tester must be confirming to ASTM E303: 93 (2018), EN 1097-8:2008, AS/NZS 4586:1999, EN 13036-4:2011 and BS 7976

Accessories

The tester should be supplied with all the accessories for conducting the skid resistance test on the specimens and pavements and in all the conditions as mentioned in Equipment features, including the following:

1. Additional scale for tests on polished stone value specimens.
2. Thermometer for surface temperature measurement
3. At least 3 sets of rubber slider
4. Washing bottle
5. Robust carrying case
6. Ruler for sliding length verification
7. Tool set for machine assembly

Any optional accessories suitable for the Skid Resistance Tester may also be quoted. However, the purchase of the same will be solely depending on the availability of the funds.

Safety Features

All the safety-related concerns must be stated, and details of functional access provided for safety-related problems should be mentioned in detail.

GENERAL TERMS AND CONDITIONS

- The supplier/vendor must be an original equipment manufacturer or the sole authorized agent/dealer/seller of the proprietary item.
- The system should be delivered within 14-16 weeks from the opening of the letter of credit or issue of the purchase order, whichever is later.
- Costs and related information should be given only in the financial bid.
- The cost should include 12months warranty of the overall system and CIF up to Chennai.
- The warranty shall commence only from the date of equipment installation at IITM.
- Prices quoted should be valid for at least 90 days.
- Item-wise break up of cost should be provided in the commercial bid for different items.
- IIT Madras reserves the right to exclude some items from the purchase.
- The payment conditions consist of 90% LC at site and 10% after installation and satisfactory training.
- The system should be installed and commissioned with no additional cost.
- Training at IIT Madras should be provided with no additional cost.
- Two copies of the system manual should be provided in CD form.

Technical Bid should comprise of the following:

- Detailed Technical brochure
- Detailed technical write up explaining how the Technical Specifications are complied with.
- The list of at least three Institutions/R&D units/Industry where similar installations have been supplied in India as well as in abroad (3 each for India and abroad) including contact details (name of the person in-charge, email and phone number) is to be provided.
- The vendor should guarantee round the clock technical support not only during the warranty period but even beyond through an annual maintenance contract. Demonstration of having provided such satisfactory technical support to customers shall be enclosed with the technical bid.

**TECHNICAL SPECIFICATIONS-CUM-COMPLIANCE TABLE FOR PENDULUM SKID RESISTANCE
TESTER**

NOTE: For each specification, please enter “YES” or “NO” in the second column of this table. **If a cell in the second column is left blank, then it will be assumed that the quotation does not comply with the respective specification/requirement.** Provide catalogues, data sheets and/or other documentation to support the compliance of your equipment to the given specifications.

1.0 Equipment Features	Yes / No	Remarks
1.1 The Pendulum Skid Resistance Tester must be capable of measuring the frictional resistance between a rubber slider mounded on the end of a pendulum arm and the test surface		
1.2 The tester must be capable of evaluating the skid resistance of the surface in both wet and dry surface conditions		
1.3 The tester must be portable and capable of measuring the skid resistance of laboratory specimens and field surfaces		
1.4 The tester must be capable of testing the concrete pavements, bituminous pavements, pedestrian walkways and paver blocks and paver stones		
1.5 The tester must be capable of testing the aggregates in the Polished Stone Value test		
2.0 Technical Requirements for Gyrotory Compactor		
2.1 The skid resistance tester must be confirming to ASTM E303: 93 (2018), EN 1097-8:2008, AS/NZS 4586:1999, EN 13036-4:2011 and BS 7976		
3.0 Accessories		
3.1 The tester should be supplied with all the accessories for conducting the skid resistance test on the specimens and pavements and in all the conditions as mentioned in Equipment features, including the accessories given below		
3.2 Additional scale for tests on polished stone value specimens		
3.3 Thermometer for surface temperature measurement		

3.4 At least 3 sets of rubber slider		
3.5 Washing bottle		
3.6 Robust carrying case		
3.7 Ruler for sliding length verification		
3.8 Tool set for machine assembly		
4.0 Safety Features		
4.1 All the safety-related concerns must be stated, and details of functional access provided for safety-related problems should be mentioned		
5.0 Manufacturer Experience, Installation & Training		
5.1 Provide a list of at least three Institutions/R&D units/Industry where similar installations have been supplied in India as well as in abroad (3 each for India and abroad) including contact details (name of the person in-charge, email and phone number) is to be provided.		
5.2 Hands-on training on the testing, data acquisition and basic maintenance of the equipment should be provided for a period of at least two full working days at IIT Madras, Chennai.		
5.3 The manufacturer must have a well-qualified technical support team.		