A. Proposal Details

Part - 1

Organization Type: R&D/Scientific/Academia

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Part - 2

5. Proposed title of Standard	Methods for testing and performance of turbomolecular pump with backing pump
6. Aspect	Methods of tests
7. Define subject of standard	Turbomolecular pumps with appropriate backing pump are routinely used to achieve high, ultra-high vacuum . Such pumps are back bone of all the vacuum systems used in various industries and R&D. Hundreds of these pumps are imported in India every year. However, no BIS standards exist to test quality and performance of these imported pumps.
8. Most Relevant Technical Department	MED (Mechanical Engineering Department)

Part - 3

9. Scope of proposed standard	Methods for the measurement of performance characteristics of turbomolecular vacuum pumps along with backing pump: volume flow rate curve, throughputs and backing pressure, compression ratio curve
10. Purpose and Justification	Turbomolecular pumps with appropriate backing pump are routinely used to achieve high, ultra-high vacuum . Such pumps are back bone of all the vacuum systems used in various industries and R&D. Hundreds of these pumps are imported in India every year. However, no BIS standards exist to test quality and performance of these imported pumps.
11. Likely users of standards and their inputs	Industries, R&D institutions, academia
12. Any related standards/series of standard/system standard required to make this subject standard complete	ISO 27892:2010 - Vacuum technology, ISO 21360-1, ISO 21360-4:2018- Vacuum technology, Standard methods for measuring vacuum-pump performance, ISO 14839-3:2006 - Mechanical vibration, ISO 14839-2:2004 - Mechanical vibration - Vibration of rotating machinery equipped with active magnetic bearings
13. When the final standard would be required	01-06-2024
14. Any specific problem being faced without this standard	No BIS standard or guidelines to test the performance
15. Bearing with Govt legislation regulation, etc	It is mandatory to have BIS standards for most of the products and if such standards do not exist then these should be created, especially for imported goods.

16. Name and address of manufacturers/ implementing/ industries/ purchasing organization /component supplier/ raw material supplier, if any	1. Pfeiffer Vacuum GmbH, Berliner Strasse 43, D 35614 Asslar, Germany, 2. Agilent Technologies, Inc., 5301 Stevens Creek Blvd, Santa Clara, CA 95051, United States, 3. Edwards Vacuum, Innovation Dr, Burgess Hill, United Kingdom, 4. Leybold, Bonner Strasse 498 (Bayenthal), Cologne 50968, Germany
17. Status of the industry in the country	As of now, turbomolecular pump is not being manufactures in the country. However, various kinds of backing pumps are being manufactured in India.
18. Availability of test facilities in the country	Some of the test facilities may be available at CSIR-National Physical Laboratory, New delhi
19. Whether related to variety reduction, export, health, safety consumer protection, mass consumption, energy conservation, technology transfer, technology upgradation, protection of environment & other National priorities	Yes
20. Whether subject requires consideration to be given to women/girl issues in line with Sustainable Goal 5 of the UN. If so, whether the issues are proposed to be addressed suitably in the proposed standard	Not sure
21. Relevant supportive document (download docs)	
22. R & D work done in india	Pressure and vacuum standards section of CSIR-National Physical Laboratory, New Delhi is active on R&D related to testing and performance check of vacuum pumps
23. Any foreign collaboration (give details)	May collaborate with International Organization for Standardization
24. Liaison with any organisation(s)	Proposed work can be lesioned with various reputed NMIs around the world.
25.A. Preparatory work	No draft possible
25.B. Preparatory work (Details)	More technical details are needed before preparing a draft.
26. Whether this project can be funded by your organization	May be
27. Whether your organisation would be interested to opt for BIS Standard Mark once the standard is published?	Our organization may be interested.

28. Any Other Attachment (extra)

B. Action Logs

C. Communications