

Workshop on Bearings

**Challenges in dimensional, form,
waviness, and roughness metrology
for bearings**



**Strada delle Cacce 91,
10135 Torino, Italy**

October 1st, 2015

Organized by



***You are cordially invited to attend the
Workshop on bearings at the
Istituto Nazionale di Ricerca Metrologica
(INRiM), Torino, Italy, Oct. 1st, 2015***

This workshop belongs to a Joint Research Project "Traceable measurement of drive train components for renewable energy" within the European Metrology Research Programme EMRP. The JRP focuses on traceable 1D-3D measurements on high accurate components of large drivetrains, namely:

To provide candidate solutions for measuring and characterising 2D and 3D parameters for size, form, waviness and surface roughness in large drivetrain components;

To research and develop measurement standards and calibration procedures for establishing traceability and estimating measurement uncertainty of drivetrain component manufacturers;

To establish and quantify the key additional sources of uncertainty that influence industrial measurement capability, with particular reference to environmental effects;

To develop a virtual measuring process which includes all the significant uncertainty contributions from the workpiece, environment, measuring strategy, and measuring instrument;

To test the developed measurement standards in industry and critically analyse the performance compared to traditional standards, such as gauge blocks, step gauges, etc.

Scope of the workshop

To arrange a technical meeting with delegates from industry and National Metrology Institutes (NMIs) with the aim to assess the current challenges in dimensional, form, waviness, and roughness metrology for large bearing elements under the aspect of economical relevance. The workshop will stimulate the exchange of information between metrologists in science and industry and manufacturers.

Topics

- dimensional, form, waviness and roughness measurements of large bearing elements
- calibration standards and traceability (material measures)
- measurement and evaluation strategies (sampling density, dynamics, filter types and settings, standards)
- methods and measurements needs in quality control

Workshop format

The above mentioned topics will be covered by talks and panel discussions in which participants are invited to introduce their own applications and/or needs.

Information on the web

Actual information will be available on the web sites:

<http://www.inrim.it>

<http://www.ptb.de/emrp/drivetrain.html>

Speech & panel discussions

<http://www.ptb.de/emrp/drivetrain.html>

Participants wishing to introduce their own applications and/or measurement needs in the metrology of bearings are asked to notice it in the registration form or otherwise to inform the contact person by e-mail and/or the chairman at the registration desk.

Registration

Participants (delegates from industry and National Metrology Institutes) are asked to register by the September 15th, 2015.

No fee are due for registration.

The registration form is available at the web sites

<http://www.inrim.it>

<http://www.ptb.de/emrp/drivetrain.html>

Location

The workshop will take place at the Istituto Nazionale di Ricerca Metrologica (INRiM), Strada delle Cacce 91, 10135 Torino, Italy .

(information on how to get INRiM at <http://www.inrim.it/gen/directions.shtml>)

Hotels and travel informations

<http://www.inrim.it>

<http://www.turismotorino.org>

Contact address

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TIME table

15.9.2015 – Registration

01.10.2015 – Workshop

How to get to Turin

For info about how to organize your trip, please visit the pages "Getting here" at

<http://www.turismotorino.org/index.aspx?lingua=EN>

Location map



Workshop on bearings, INRIM, 01 October 2015

Industrial workshop to assess the current challenges in dimensional, form, waviness, and roughness metrology for bearings

Programme - preliminary

8.00 – 9.00	<i>Registration</i>
9.00 – 9.15	<i>Welcome/Introduction</i>
9.15 – 9.30	Otto Jusko / Ann-Kristin Möller, PTB, <i>The Drive Train project</i>
9.30 – 10.15	Dario Cavallo, SKF Industries, <i>Industrial machinery requirements in terms of precision both of bearings and their seats and fits</i>
10.15 – 10:45	Coffee break
10:45 – 11:15	Gian Bartolo Picotto, INRIM, <i>Design and feasibility of a large ring segment</i>
11:30 – 12:30	Otto Jusko, Chairman, <i>Discussion about the specific metrological needs of the bearings industry and its project demands (e.g. with Schaeffler, Germany) - Part I</i>
12.30 – 13.30	Lunch
13.30 – 14:00	Michele Deni, MetroSoft, <i>Mechanical Surfaces Characterization for ISO-GPS Functionality Correlation Evaluation</i>
14:00 – 15:30	Otto Jusko, Chairman, <i>Discussion about the specific metrological needs of the bearings industry and its project demands and conclusions – Part II</i>
15:30	End of Workshop