

## Leonardo Research Centre for Tribology

Tribology is the study of friction, wear and lubrication between the surfaces moving relative to each other. Leonardo Research Centre for Tribology is established to find the new materials for mechanical and automotive applications.

Leonardo research centre is equipped with pin-on-disc friction/wear test rig and stir casting furnace. Wear test rig is primarily intended for analyzing the tribological characteristics (Coefficient of friction, frictional force, wear, interface temperature) of wide range of materials (Metals, alloys, cold and heat treated materials, hard coated materials, composite materials) under the various conditions of the load, velocity, duration and temperature with and without lubricants. Stir casting furnace is employed to fabricate the metal matrix composites.



**Pin on Disc Friction and Wear Test Rig**

This laboratory is utilized to support the industry in finding solutions related to wear, friction, lubrication and maintenance. Suitable materials, coating materials and lubricants are suggested to enhance the sliding wear resistance of the components. It is used to educate the

research scholars, engineers and students in tribological aspects. It is also employed to carry out the projects of UG / PG students and Research scholars.

Dry sliding tribological behaviour of aluminium alloys under the high load and speed conditions was performed for the local industry in order to choose the suitable sliding pin material in the textile application. Friction behaviour of three different grades of heat treated (hardened) high tensile steels specimens was performed to select the suitable spindle material in conveyor applications.

Apart from the industry oriented projects, faculty members do publish their research findings in the international journals. Tribology based research articles have been published by the faculty members and research scholars in the international refereed Scopus, Web of Science and SCI Journals such as Journal of Materials Research and Technology, Acta Metallurgica Slovaca, Materials Physics and Mechanics, UPB Scientific Bulletin, Mechanics and Mechanical Engineering, Materials Research, Materiali in Tehnologije etc.