

Measurement of: Processing of Metals and Alloys are carried out by melting up to 1500°C followed by rapid cooling to form ribbons or flakes.

Equipment: Melt Spinning Unit, Edmund Bühler GmbH

Property Measured: Melt spinning of metals and alloys up to 1500°C. The end product will be amorphous or nanocrystalline microstructural ribbon/flakes.

Photograph (small size)



Melt Spinning Unit

Basic Principle:

Melt spinning is a technique used for rapid cooling of melted metals/alloys to make amorphous or nanocrystalline ribbons/flakes. Alloys are melted employing induction melting technique. A thin stream of melted metals/alloys is dripped/ejected onto the water cooled fast rotating copper wheel causing rapid solidification in the form of ribbon or flakes. Surface velocity of 35m/s can be achieved from Melt Spinner HV. Due to rapid cooling nanostructured or amorphous material can be synthesized.

Capabilities: Synthesis of nanostructured or amorphous material possible up to 1500°C.

Sample Requirement: 2 to 10g