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Molten metal splash test equipment

Description







The equipment consists of a self-contained steel cabinet, comprising three chambers.

The lowest chamber houses a pneumatic cylinder, which provides the means to eject the molten metal charge.

The centre chamber contains a single ejector head which is fitted to the end of the piston rod of the air cylinder. A crucible containing a molten metal charge is loaded in here using the tongs provided.

The top chamber contains the sample mounting platform, which has a vertical hole connecting to the centre chamber, allowing the ejected metal charge to impact upon the underside of the sample which is secured to the platform.

Also shown in the upper photograph is the hand operated, spring return mushroom button air valve, which is normally located on the left side of the cabinet at the top and the compressed air line feeding this valve. When pressed, the valve causes the metal charge to be ejected.

Services required

Floor mounted.

Compressed air at a pressure up to 8 bar.

Furnace (in which to place the crucibles of metal, until molten).

Emissions from the contact of molten metal with plastic can be expected and will need to be extracted from the vicinity of the rig.

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Molten metal splash test equipment (continued)

Consumables

Aluminium slugs (mass 38g)

Iron slugs (mass 100g)

Crucibles*

** Crucibles supplied for the aluminium slugs have nominal dimensions 50ml capacity, 38mm nominal depth, 2mm nominal thickness and 46mm nominal lip diameter. Crucibles supplied for the iron slugs have nominal dimensions 68ml capacity, 48mm nominal depth, 2mm nominal thickness and 51mm nominal lip diameter.*

Slugs and crucibles are not supplied with the equipment but available to order from INSPEC.

Approximate dimensions and weight

55 x 52 x 108 cm : 110 kg

Relevant standards

AS/NZS 1337-1:2010
EN 166:2001
EN 168:2001 and other standards that use this test method
ISO 16321-1:2021
ISO 18526-3:2020 and other standards that use this test method