

Probes

For DINSEARCH 1-00



There are a limited number of standard sizes for the outside diameter of the tubes used in heat exchangers and boilers but the wall thickness varies to suit the application. Carbon steel tubes are often dirty and the bore coated with deposits or corrosion products, consequently, while there may be few outside diameters, there can be many different bores.

For each standard outside diameter of tube there is a DINSEARCH probe body. Sheaths are fitted to this body to bring its diameter up to suit the bore of the tube. This way, one tube body and its set of interchangeable sheaths will inspect any of the common gauges of tube of the particular outside diameter and cope with small amounts of coating on the bore.

The illustration shows the probe for 25.4mm tube (1 inch), fitted with a 17.5mm sheath. There are 5 more sheaths in the set ranging from 17mm diameter to 19.5mm diameter so that the probe can be given any outside diameter from 17mm to 19.5 mm in 0.5mm steps.

All small diameter probes are hard chrome plated to ensure minimum wear in the harsh environment of the inside of corroded carbon steel tubes.

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Specifying

State the outside diameter of the tube that is to be inspected and its wall thickness. Probes are supplied with a set of interchangeable sheaths and will inspect the normal range of wall thickness appropriate to that outside diameter but special probes may be required if the wall is unusually thick or thin.

Changing the sheath

Remove the M5 socket head bolt from the end of the probe.

Pull the sheath off the probe, taking care not to damage the windings.

Apply a small amount of silicone grease to the 'O' ring seals and gently slide the replacement sheath onto the probe. If present, make sure that the anti-rotation pin enters the locating hole in the sheath and that the sheath is fully onto the probe body.

Apply a small amount of 'Nutlock' or similar anti-vibration locking agent to the M5 socket head bolt, replace it in the probe and tighten'

Cooling air

DINSEARCH probes contain an electromagnet and most probes, especially small diameter ones, need a supply of cooling air for prolonged operation.

The cooling air must be clean and dry. Filtered air from a site air line is acceptable. A better alternative is to use a small portable compressor or the DINSEARCH 1-03 cooling unit.

Caution

Probes are not designed to be scrapers for cleaning dirty tubes. If a probe becomes stuck in a tube it is better to push it out with a rod from the far end of the tube than for the 'tug-o-war' team to attempt to pull it out.

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