

ASAMS

ASAMS SYSTEM 3 MAGNETIC PARTICLE INSPECTION

The ASAMS SYSTEM 3 MPI is a result of further development of well proven and highly successful OIS underwater technology systems which have been used by underwater operators around the world since 1980.



System Features:-

- Three magnetising techniques in one system.
- Full surface control and monitoring facilities.
- High intensity Ultra-Violet (U/V) Lamp.
- De-magnetising facility.
- Transformer isolated power supply.
- Built-in Earth Leakage Detectors.
- Operates at any depth.

Manufactured now by ASAMS, the SYSTEM 3 MPI is a modular design employing a sophisticated power control Surface Unit and an integrated, pressure compensated, Subsea Unit with built-in ink management systems.

A heavy-duty isolating transformer supplies power to the Surface Unit, which is connected to the Subsea Unit via a single 200 metre umbilical, which is deployed from a strong hand operated spooling frame.

The Surface Unit is housed in a rugged stainless steel case with removable front cover. Its key features include: • An input-output current ammeter • Earth Leakage detectors and trips • A magnetising loop operation indicator • A demagnetising facility • Remote control of the magnetising current.

The Subsea Unit has AC and DC outlets for three magnetising techniques - Electromagnetic Yoke, Magnetising Coil and Prods. The Magnetising Coil and Prods can be AC or DC powered, whilst the Yoke is DC powered and allows bolt-on articulated sections to be fitted to enable inspection of irregular/awkward shaped work pieces. These three options allow the user to select the best tool for a particular structure or pipeline configuration, increasing operational flexibility and speeding up MPI diving programmes.

The Subsea Unit contains a 7KVA magnetising transformer, power/supply conditioning choke for the powerful UV lamp and a motor-driven ink circulation system which continuously agitates the magnetic particles. The top of the unit carries a 10 litre ink reservoir fitted with quick-release hoses to enable the diver to change the reservoir easily.

The Powerful UV Lamp is connected to the Subsea Unit via a 6 metre combined power and ink delivery umbilical. A lever controlled ink nozzle on the lamp head allows one-handed operation

SPECIFICATIONS:

ASAMS reserves the right to change product specifications, without prior notice, as part of an ongoing improvement program.

ISOLATING TRANSFORMER:

Power Supplies: 110V to 240V ac, 30A, Single Phase; or
380/440V ac, 15A, connection across Two Phases.

Power Output: 8KVA mains isolated with Earth Tap.



SURFACE UNIT:

Front Panel: Mains Supply Indicator.
Earth Leakage Trips - Mains and U/V Lamp.
Dual Range Ammeter 40A to 1500A (for magnetising current).
Independent Switching of U/V Lamp and Ink Pump supplies.
Magnetising Loop Indicator.
Demagnetising Facility.
UV Lamp Indicator.

Housing/Case: Stainless Steel with removable front cover.
Dimensions: 480mm x 250mm x 250mm.
Weight: 35.5kg.



SUBSEA UNIT:

Housing: Anodised Aluminium, oil filled - pressure compensated.
Outputs: (a) 7KVA Power Transformer (Magnetising Current):-
1500A ac. (Continuous), open circuit voltage of 5V RMS.
1500A dc. (5min. On/Off Duty Cycle).
(b) 200V ac Output for U/V Lamp via supply conditioning choke.

Ink System: 10 litre Stainless Steel housed Reservoir Bag with
quick-release connectors. The ink is agitated by a
motor driven pump system in the Subsea Unit.

Dimensions: 365mm diameter x 450mm overall height.
Weight: 56.8kg in Air, 26kg in Seawater.



U/V LAMP:

Mercury Arc Lamp: Life typically > 1000 hours
Warm-up time: 3 - 5 minutes.
Light Output: 1 .4mw/cm2 at 450mm.
Dimensions: 150mm diameter x 240mm overall length.
Weight: 1.6kg (in sea water).



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