

Teledyne Impulse-PDM

Polyethylene Moulding

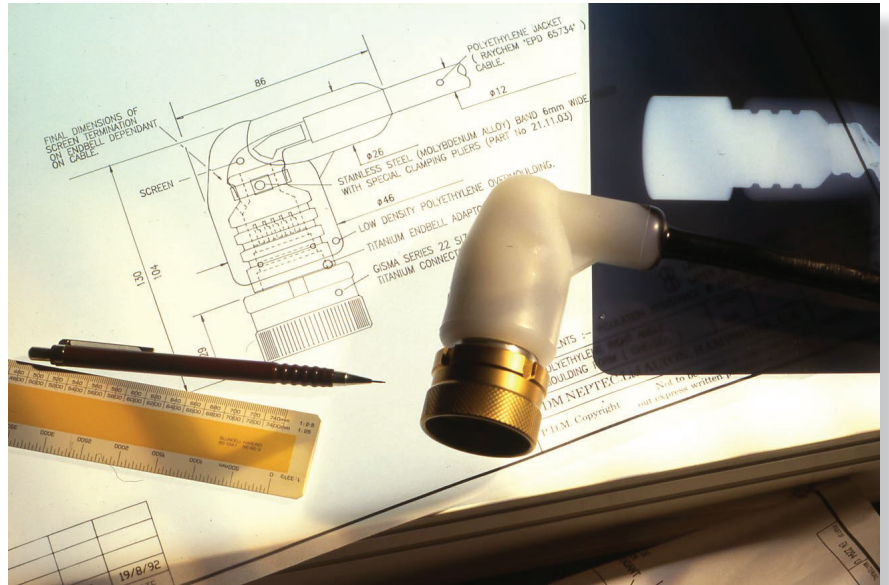
Custom Polyethylene Moulded Assemblies

Engineering for the underwater environment

Polyethylene cables have been extensively used for underwater work because of their intrinsic resistance to all aspects of the subsea environment. The applications however have always been limited due to the difficulty in obtaining a reliable bond to other materials. In essence designers have adopted a “polyethylene only” component approach throughout a design.



Polyethylene Moulded Connectors



*Engineering design for polyethylene moulding
(Courtesy Chelsea Instruments)*

Many attempts have been made to integrate polyethylene components into assemblies using a variety of techniques - eg. complex mechanical glands, and glutinous sealing substances. Some techniques have worked, but these have usually been expensive to implement.

PAST PROJECTS

- Navigation buoy electrical cubicles
- Special underwater electrical (including high voltage) connectors
- Water blocked penetrators
- Polyurethane encapsulated sensors and transducers
- Submarine communication cable assemblies
- Underwater cable bend control devices
- Cable strain termination

Polyethylene Moulding

Custom Polyethylene Moulded Assemblies

Teledyne Impulse-PDM (TI-PDM) has now developed a technique for bonding polyethylene to a number of metals - at present, stainless steel, titanium and aluminium. This technique involves a combination of surface preparation, priming & profiled pre-heating. In parallel a technique has also been developed for obtaining a good bond between specially selected polyurethane elastomers and polyethylene.



Gland Assembly

These processes have already been successfully used in a number of subsea applications, including cableforms and gland assemblies.

TI-PDM will be pleased to discuss your application and advise on the best approach. TI-PDM can carry out your polyethylene moulding under BS EN ISO 9001:2000 using these techniques.



Bond Testing

Please contact us if you require advice on polyethylene moulding. We will be pleased to help you with your project.