

## Under Sea Force Measurement

**Customer:**

Dubai based offshore oil company

**Loadcell:**

F203-Z3495 70 Tonne

**Generic Type:**

Donut loadcell

**Special Features:**

Sealing to 5 bar in water

Internal amplifier

The customer required nine 70 Tonne compression loadcells for an under sea platform weighing system. The platform was at a depth of 40 metres in a warm marine environment requiring IP68 water ingress protection to 5 bar pressure.

A donut loadcell was selected for its very high structural load limit. Sealing was achieved using O-rings backed up with an RTV silicon rubber joint. Cable exit sealing was provided by a cable gland augmented by a potted bell mouth housing to resist damage due to cable deflection. The case of the loadcell was designed to house a 2 wire integral amplifier and allow adjustment of the zero trim. PUR insulated cable was used for its good resistance to long term immersion in salt water.

Ingress protection tests were carried out in house to 5 bar in water. The loadcells were calibrated to full range in air at 25°C.

