

## Session 17 – Deluge Protection Standard



**SOURCE** IEC

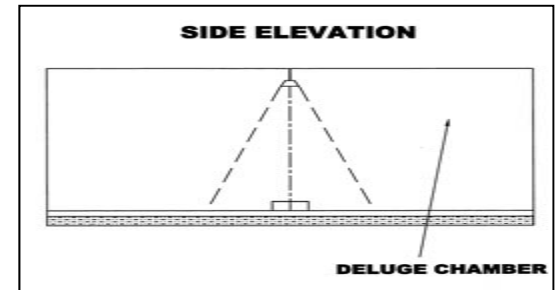
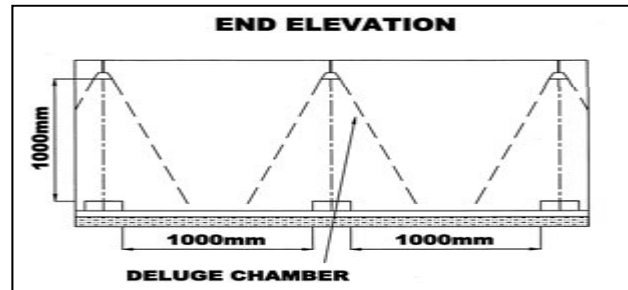
## DTSO1 Shell deluge test



This test originated with the Shell UK Exploration and Production LTD and was designed to simulate emergency deluge testing for electrical equipment in offshore locations. The objective of the test is to ensure that exposure of equipment to severe conditions will not lead to water ingress in quantities that could cause equipment to become a potential source of ignition when exposed to a flammable atmosphere. It covers fluorescent luminaries, floodlights, terminal boxes and motors. After the fixtures reach normal operating temperatures, they are subjected to cold salt-water spray. The fixtures must have less than 5 ml of water present inside and continue to meet prescribed insulation tests. The traditional IP testing procedures were determined by Shell Ltd to be not stringent enough. The DTSO1 standard has become the test procedure in the North Sea as well as other offshore world markets.



# DTS01 Shell deluge test



- Salt water pressure 62.26 PSI (4.5 bar) for 3 hours
- Electrical power 60 min prior & 120 min after
- Insulation resistance test  
500v d.c. > 10 MΩ



# DTS01 Shell deluge test certificate



**ERA**  
TECHNOLOGY

*CERTIFICATE OF COMPLIANCE*

**Number:** 5046/C549-D  
**Dated:** 29 June 1998


**Issued to:** CMP PRODUCTS

**Apparatus:** A2/A2F CABLE GLAND RANGE


*This is to certify that samples of the equipment defined above have been tested by ERA Technology Limited and found to comply with the following requirements:*

**ERA Document Reference DTS 01 : 1991**  
**Test Schedule for Enclosures to be Installed in Areas Subject to Water Deluge Systems**

*Full details are given in ERA Report No: 5046/549-D1 dated June 1998.*

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