



10K PSI / 700 BAR / 7000M  
**SuperG55™ High-Pressure,  
Dry-Mate Subsea Connectors**  
**Qualification testing**



### Test Sequence.

The samples were divided into 5 groups as described in GTS 4131 4.1, testing was then carried out in the following sequence as in GTS 4131

Test Description	QTP-G55 Requirement	Test Group		
		1 & 3	2 & 4	5
Product Examination.	7.1	x	x	x
Insulation Resistance	7.2	x	x	
Line Resistance	7.3	x	x	
Dielectric Withstand Voltage	7.4	x	x	
Initial Hydrostatic Pressure Test	7.8 B	x	x	
Thermal Shock Test	7.5	x	x	
Durability	7.6	x		
Salt Spray	7.7	x		
Final Hydrostatic Pressure Test	7.8 A	x	x	
Final Insulation Resistance	7.2	x	x	
Final Line Resistance	7.3	x	x	
Final Dielectric Withstand Voltage	7.4	x	x	
Final Examination.	7.1	x	x	x

x - applicable

### Test Method

#### Examination of Product (7.1).

All test items shall be visually examined for damage, burrs, quality of finish or other imperfections that may impair function.

#### Insulation Resistance (7.2)

IR shall be measured in accordance with EIA-364-21

#### Line Resistance, Low Level Signal Current (7.3)

Line resistance shall be measured in accordance with EIA-364-23.

#### Dielectric Withstand Voltage (7.4)

1800V (DC) shall be applied in accordance with EIA-364-20, the maximum leakage current will be recorded.

#### Initial Hydrostatic Pressure Test (7.8B)

Sample shall be tested at 6,000PSI. The test duration will be 2 hours.

IR measurements will be taken between odds & even numbered contacts and shell.



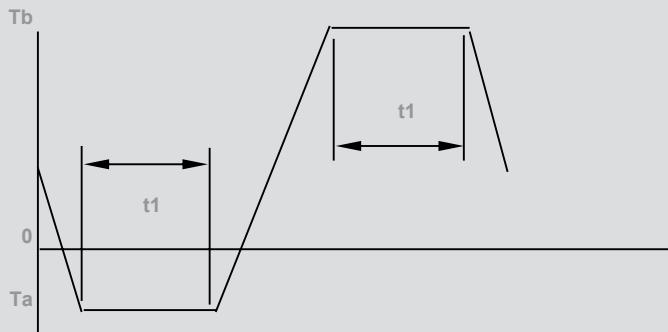


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### Test Method (continued)

#### Thermal Cycle(7.5)



**Comments:** Number of cycles:10 ,

Ta: -20c

Tb:+ 105c

Testing was performed in accordance with EIA-364-32 Method A

#### Durability (7.6)

Samples are to be manually mated and unmated for 500 cycles, the samples will then be mated manually. The testing shall be performed in accordance with EIA-364-26

#### Salt Spray (7.7)

Tested in accordance with EIA-364-26, 5% salt spray, 35°C, 500 hours duration.

#### Final Hydrostatic Pressure Test (7.8A)

Sample will be tested at 15,000PSI. The pressure will be increased at a steady rate, hold for 1 min at 1000PSI increments, the test duration will be 2 hours.

SUBSEA/DEEPWATER: SUPERG55™





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## Test Results

PROPERTY	UNIT	REQUIREMENTS	TEST METHOD	PASSED
<b>Electrical</b>				
Insulation Resistance (IR)	Ω	>1G Ω	EIA-364-21	<input checked="" type="checkbox"/>
Dielectric Withstand Voltage (DWV) 1800v, 30 secs	mA	<2mA Leakage Current	EIA-364-20	<input checked="" type="checkbox"/>
<b>Environmental</b>				
Thermal Shock 10 Cycles, -20°C - +105°C		The samples maintained functionality (including pressure performance)	EIA-364-32 Method A	<input checked="" type="checkbox"/>
Salt Spray 500 hours, 5% salt solution		The samples showed no signs of corrosion or delamination.	EIA-364-26 condition C	<input checked="" type="checkbox"/>
<b>Durability</b>				
500 Mating Cycles		The samples maintained functionality (including pressure performance)	EIA-364-9	<input checked="" type="checkbox"/>
<b>Subsea Performance</b>				
Hydrostatic Pressure Test 10,000psi 2 hour duration Open face and mated		All samples showed no signs of water ingress, mated connectors maintained IR >100MΩ throughout the test. Samples showed no signs of delamination or permanent deformation.		<input checked="" type="checkbox"/>



SuperG55 connector assemblies undergoing rigorous qualification testing in the salt spray chamber