

IMES Monitoring Overview

Mooring Systems



Mooring Systems

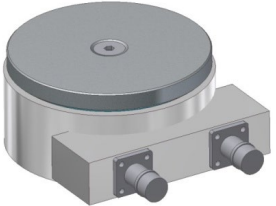
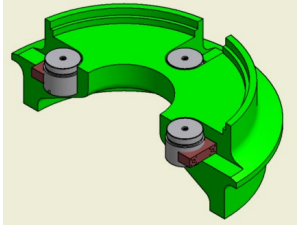
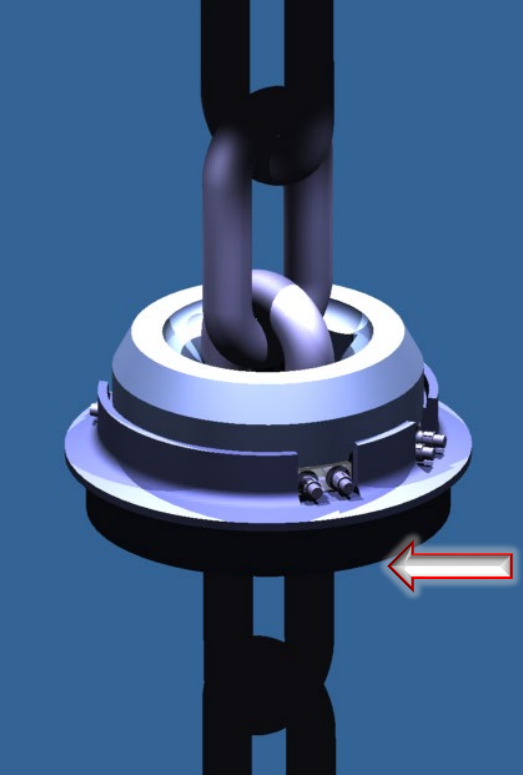
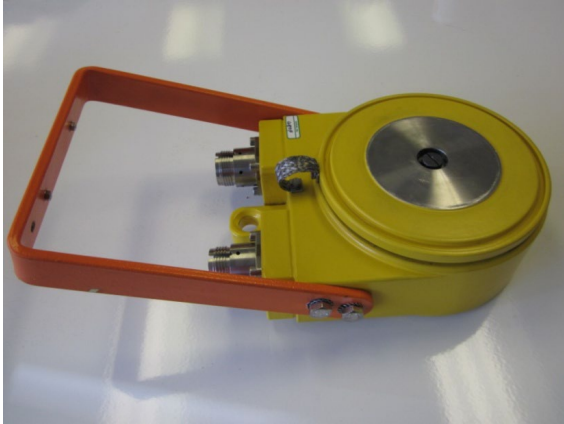
- Load cells, equipment and software for:
- Buoy Mooring Tension Monitoring Systems
- Turret Mooring Tension Monitoring Systems
- FPSO Anchor Chain monitoring
- Anchor Line Load Monitoring Systems
- Chain Stopper Monitoring Systems
- TLP Tether Tension Monitor

Mooring Systems

- Load cells, equipment and software for:
- Buoy Mooring Tension Monitoring Systems
- Vessel Mooring Monitoring
- Hawser Monitoring
- RF Telemetry systems
- Met-ocean sensor systems
- Navaid system

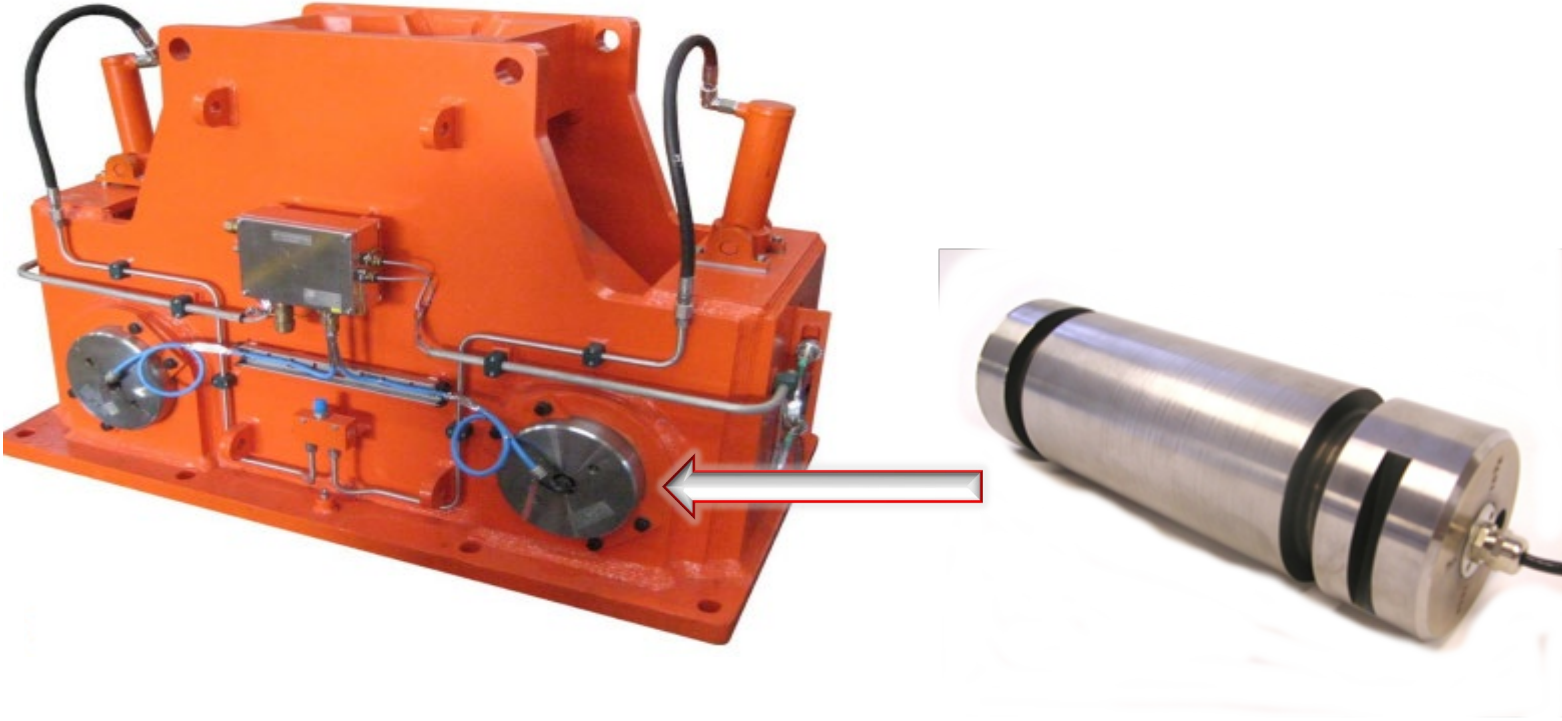


Mooring Systems FPSO



Mooring Systems FPSO

Chain-stopper Pins, Cabling and Amplifiers



Mooring Systems - FPSO

Brasil Petrobras Sheillan

BP Schiehallion (Aker Solutions)

Brasil Petrobras Marlim Sul (SBM Offshore)

Malaysia Murphy Kikeh ST (SBM Offshore)

Brasil Petrobras MV20 Cicade de Santos (Modec)

Cidade De Itaji Odebrecht TK

Technip US

Venezuela PDVSA Campo Dragon (US Contractor)

China National (Singapore Contractor)

Petrobras MV Campo (Modec)

Inpex Browse Basin FLNG Mooring

Egypt (RPC)

Mooring Cells and System

Mooring Calibration

Chain-stopper Load cells

Chain-stopper LoadCells

Chain-stopper LoadCells

Chain-stopper LoadCells

Chain-stopper LoadCells

Chain-stopper LoadCells

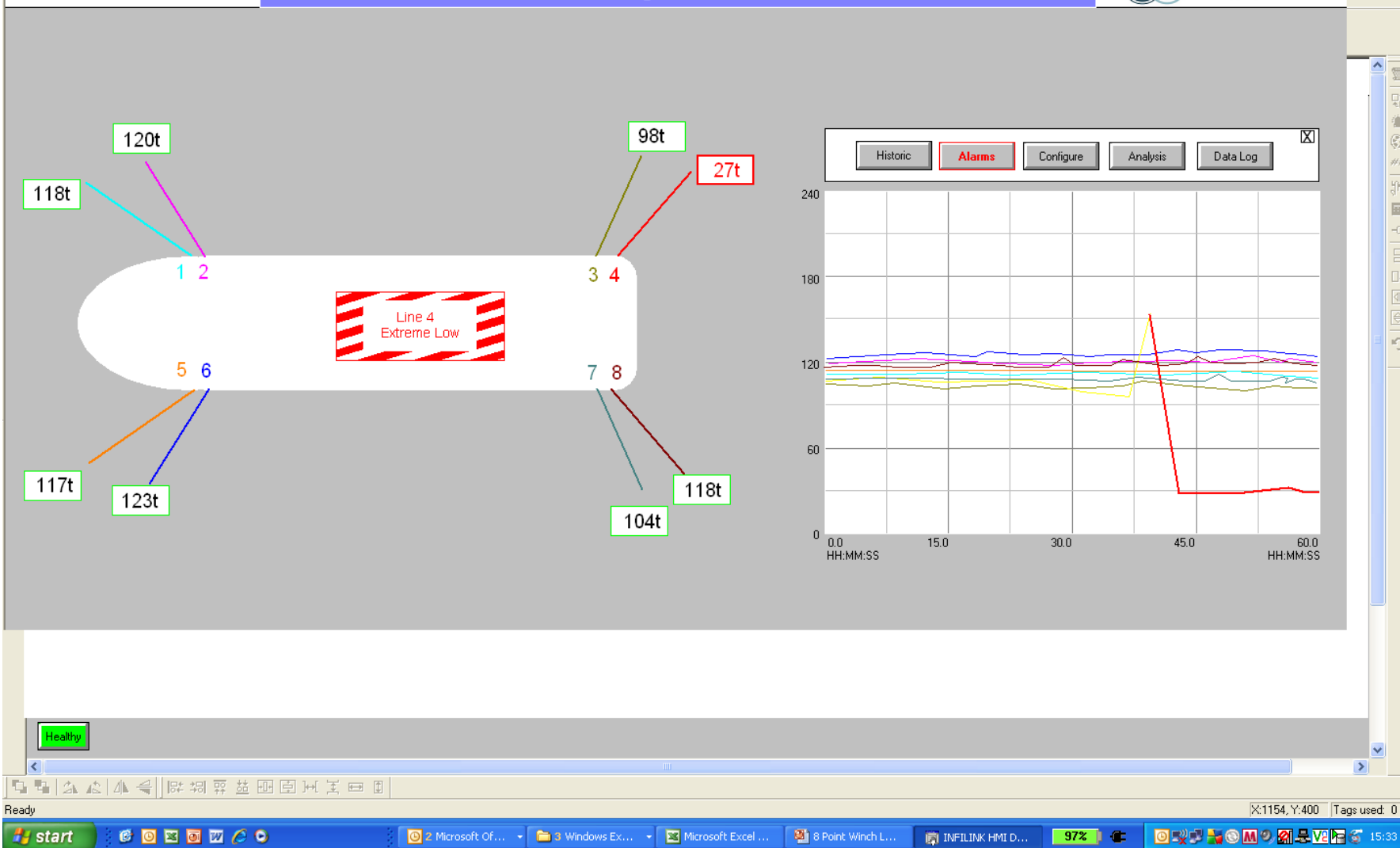
Chain-stopper LoadCells

Chain-stopper LoadCells

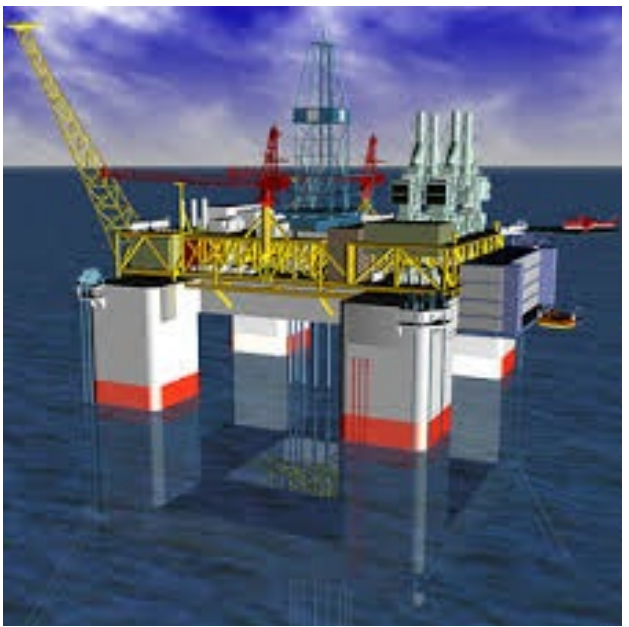
Subsea Mooring Cells

Wireless Mooring System

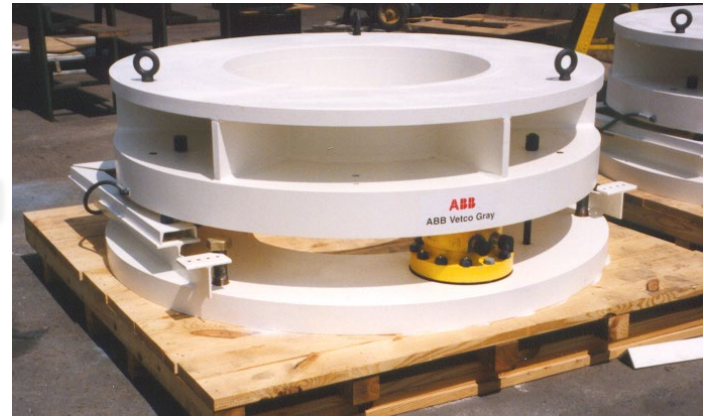




Mooring Systems - TLP



Mooring Systems - TLP



Mooring Systems - TLP

- Norway, Statoil, Snorre A, Aker– TTMS Cells cables and Electronics
- Norway, Statoil, Heidrun, Aker – TTMS Cells cables and Electronics
- US GoM, ENI, Morpeth, Atlantia Seastar – TTMS Cells, cables and Electronics
- US GoM, ENI, Allegheny, Atlantia Seastar – TTMS Cells, cables and Electronics
- US GoM, Total, Matterhorn, Atlantia SeaStar– TTMS Cells, cables
- US GoM, Total, Neptune, Atlantia Seastar – TTMS Cells, cables
- US GoM, Typhoon Atlantia Seastar – TTMS Cells, cables



INFLINK HMI Design Mode - Untitled * - [Connector]

Project Edit View Draw Styles Layout Window Tools Help

ALLMS - Connector Overview

SBM Single Buoy Moorings

Connector View - Leg 4

DavySystems

Connector View

Connector 1 Connector 11

Connector 2 Connector 12

Connector 3 Connector 13

Connector 4 Connector 14

Connector 5 Connector 15

Connector 6 Connector 16

Connector 7 Connector 17

Connector 8 Connector 18

Connector 9 Connector 19

Connector 10 Connector 20

118t

120t

LC 4.1 LC 4.2

Connector 4

LC 4.4 LC 4.3

117t

123t

Live

240

180

120

60

0

00 15.0 30.0 45.0 60.0

HH:MM:SS HH:MM:SS

| Date | Time | Type | Tag Name | Current Va | State |
|-------------|-------|----------|------------|------------|----------|
| A31/12/1999 | 23:59 | TTTTTTTT | NNNNNNNNNN | 99999999 | SSSSSSSS |
| A31/12/1999 | 23:59 | TTTTTTTT | NNNNNNNNNN | 99999999 | SSSSSSSS |
| A31/12/1999 | 23:59 | TTTTTTTT | NNNNNNNNNN | 99999999 | SSSSSSSS |
| A31/12/1999 | 23:59 | TTTTTTTT | NNNNNNNNNN | 99999999 | SSSSSSSS |
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| A31/12/1999 | 23:59 | TTTTTTTT | NNNNNNNNNN | 99999999 | SSSSSSSS |

System

System Status **Healthy**

Log Status **Healthy**

Alarm Status **None**

View Status **Live**

Page

Overview Historic Alarms Configure Analysis Data Log

Thursday 02/03/2010 14:55:22

Mooring Systems

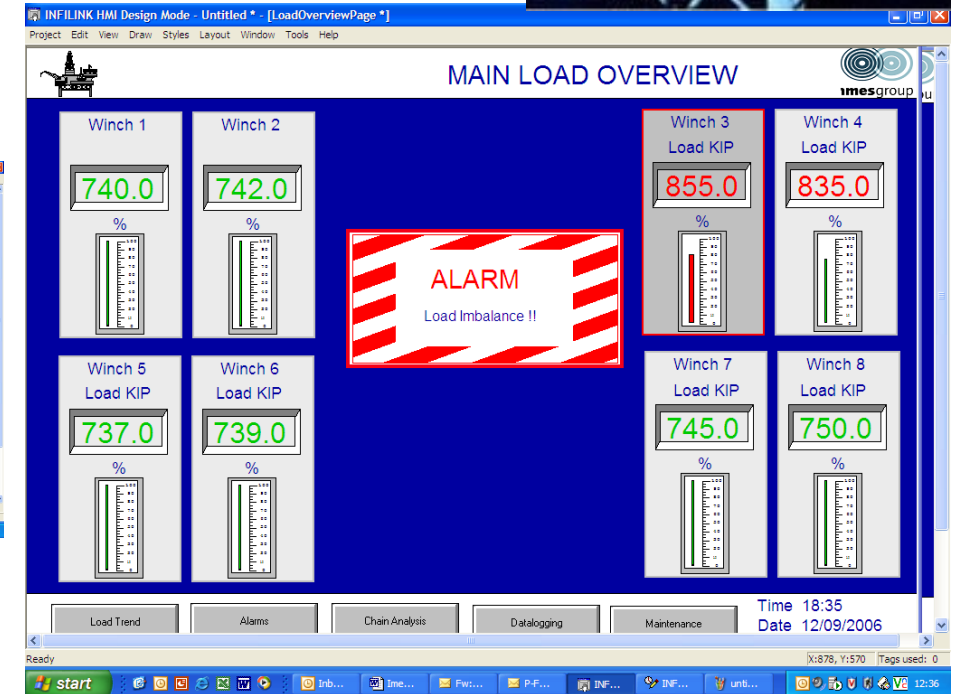
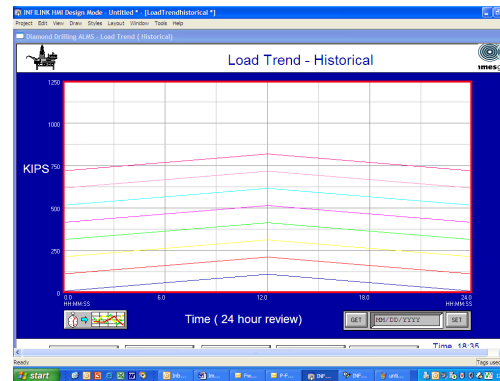
Anchor Line Load Monitoring Systems (ALLMS)



Mooring Systems

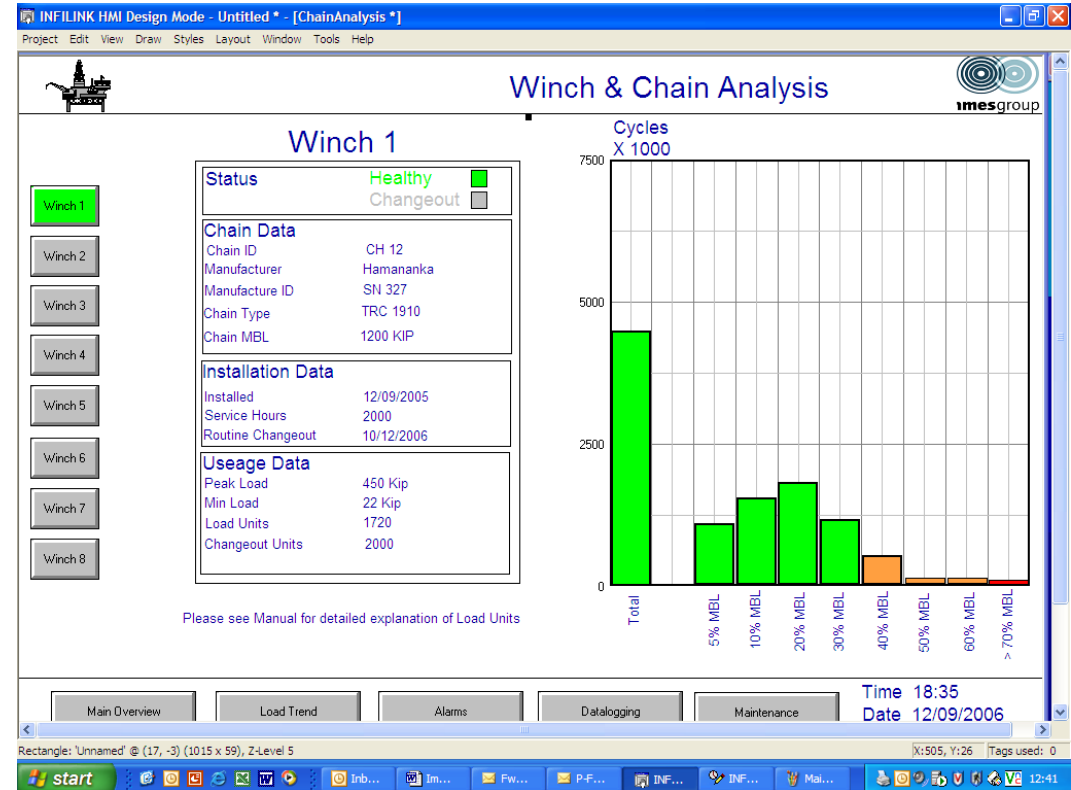
Anchor Line Load Monitoring Systems (ALLMS)

- Visualisation
- Alarms
- Trending and Data-logging
- Safety Management software
- Winch /Chain use & Status data



Mooring Systems

- Status and Analysis
- Peak Load data
- Load Cycle data
- Load units
- Change out data
- Risk Based Inspection

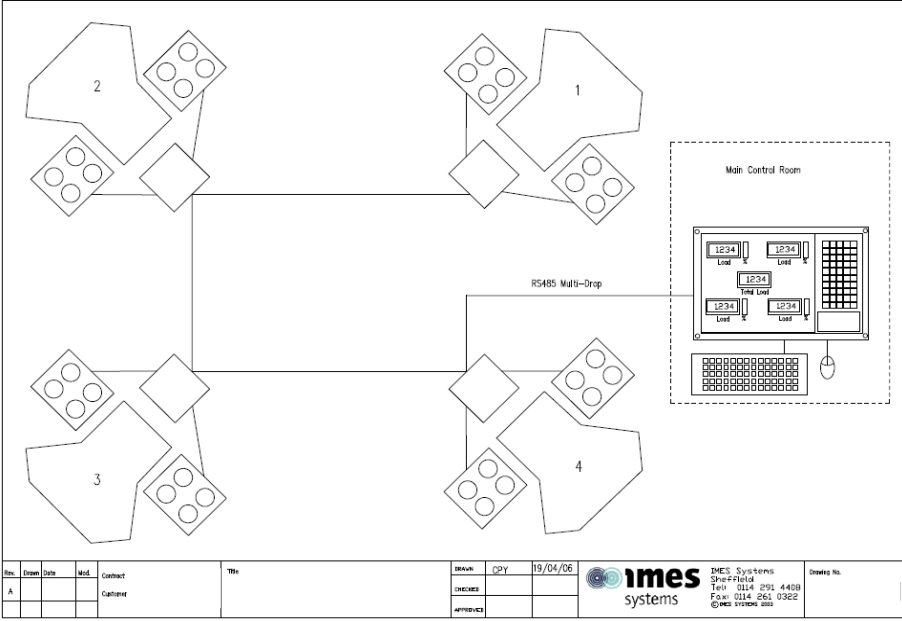
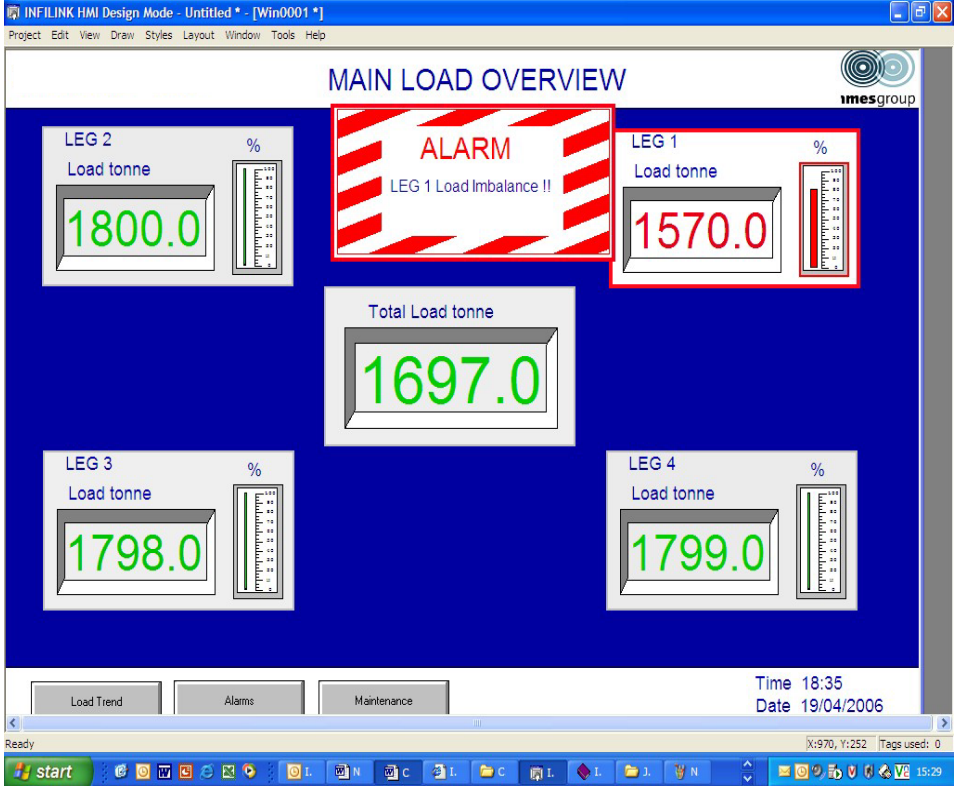


Jack Up Monitoring

- Jack load monitor
- Load & Torque based Systems
- Leg Load Alarms
- Imbalance alarms
- Data logging
- Visualisation



Jack Up Monitoring



Mooring Systems

- In line Mooring connectors,
- Chain interfaces
- Risers and structures
- Diver and ROV Deployed Systems
- Acoustic Modems, cabled, local logging
- Long Battery Life
- In series or parallel solutions

