

# FALKLANDS MARE HARBOUR PROJECT

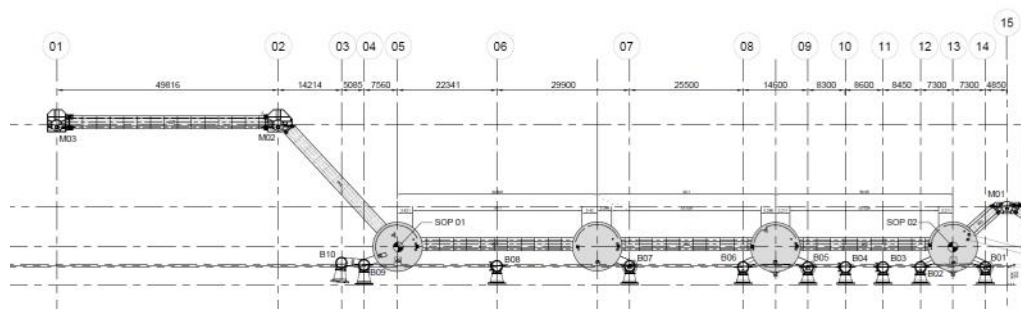
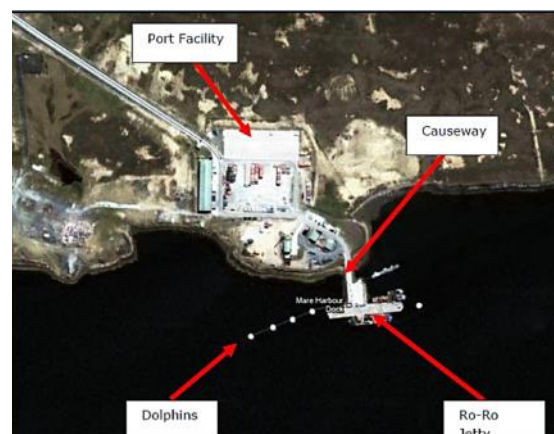
## HARBOUR PROJECT

<b>Project Name</b>	Falklands Mare Harbour Project
<b>Contractor</b>	Volker Stevin International
<b>Client</b>	Defense Infrastructure Organisation , UK
<b>Location</b>	Mare Harbour, Falklands Island
<b>Product</b>	LSAW Pipe
<b>Total Tonnage</b>	800 MT
<b>Delivery Date</b>	Mar 2017

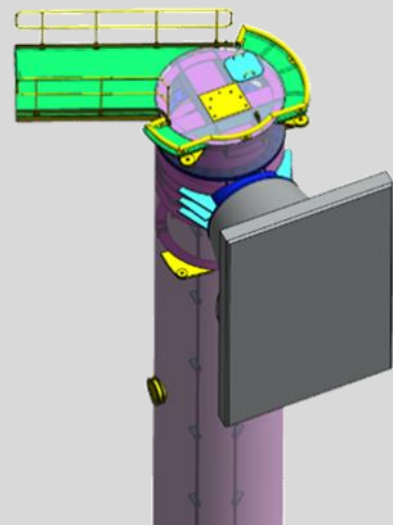
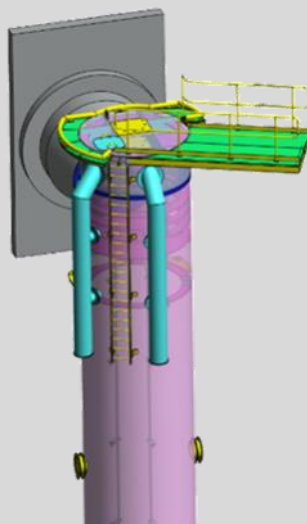
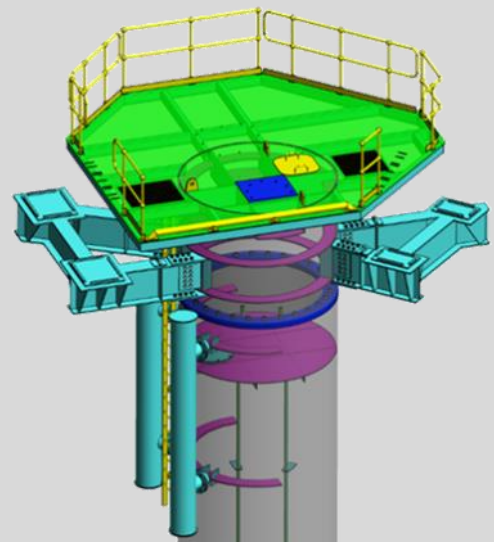
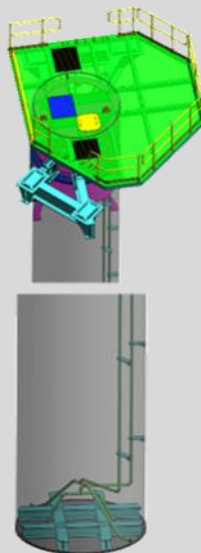
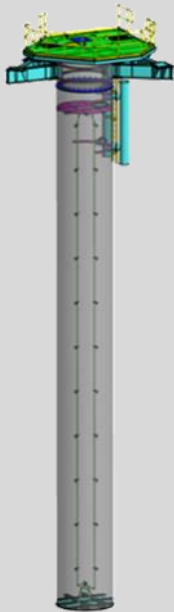
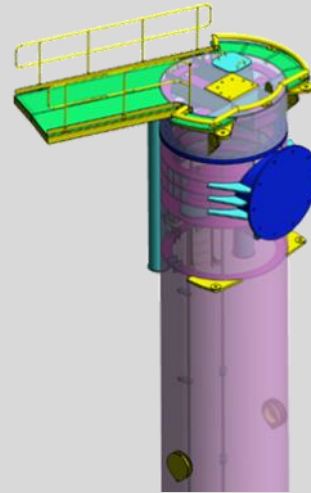
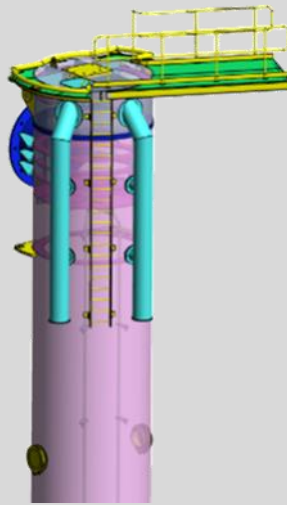
## ESC SCOPE OF SUPPLY

### LSAW PIPE

ESC has been awarded the contract to supply 800MT of mooring pile for Mare Harbour RoRo facility upgrade project in the Falkland Islands. ESC's scope of supply include the pipe pile and the pile head steel structure (bollards, anchor bolts, fenders, chains, and other related connection parts). The pipe with external diameter of 1067 ~ 2489mm and the steel grade of the project are S355J2, API 5L X70 and X80.



## PILE DESIGN 3-D DRAWINGS





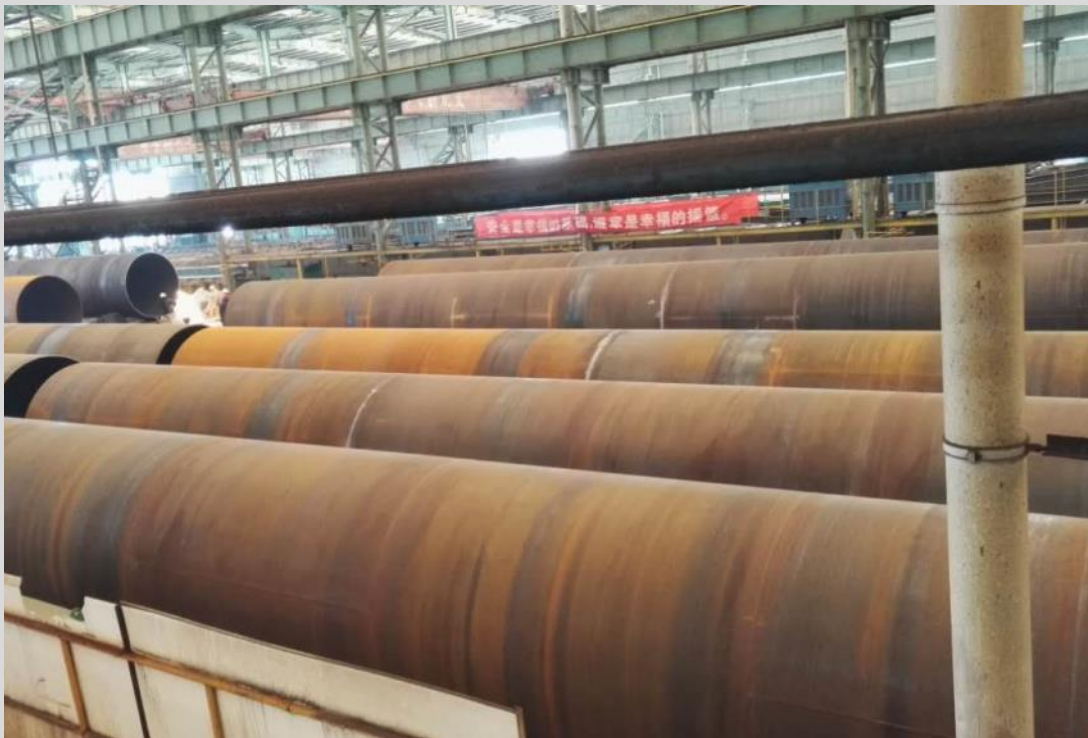
# LSAW STEEL PIPE FORMING

Each heat number is retested to confirm all material mechanical properties and chemical composition is as per requested by the client.

Material traceability (part number and heat number) is maintained (physical marking and paper records) throughout the production

processes starting from incoming raw material to the finished product.

Welding is carried out in accordance with ISO 15614 standard. All welds are tested with 100% visual inspection, 100% ultrasonic test, and 10% magnetic particle inspection with quality level complying BS EN 5817 category C.



# MOORING PILE HEAD FORMING

All components that are delivered as loose items are trial assembled as per design drawings to ensure all items fit and to minimize the risk of delivering defective components to the field.



## MOORING PILE HEAD COMPONENTS



PILE HEAD STIFFENERS



LADDER



TRUNNION



HANDRAIL



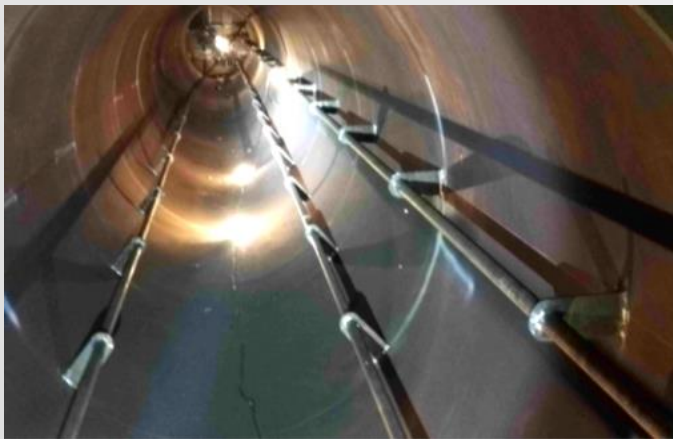
PILE HEAD STRUCTURE



# WELDED COMPONENTS

## STEEL PIPE WITH WELDED COMPONENTS

After the welding of grout pipes, all grout pipes are tested with a water pressure test at the pressure of 2MPa with a holding time of 15 minutes to ensure no leakage during the application.



PILE HEAD STIFFENERS



WELD INSPECTION



UT



MPI

# PAINTING

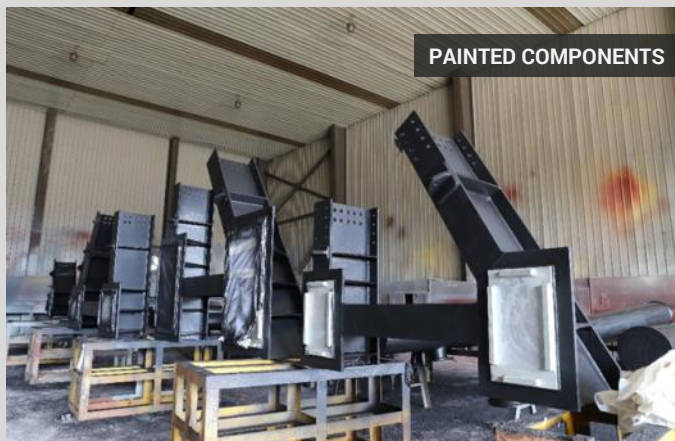
## SURFACE CONDITION

Surface Cleanliness: Sa 2.5

Surface Roughness: >75 microns



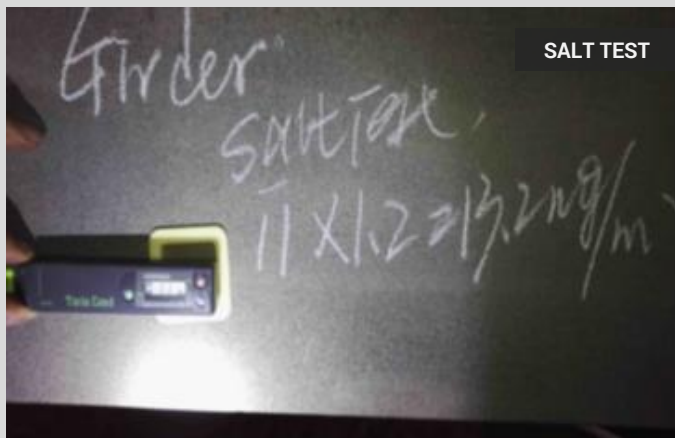
ANTI-SKID COATING



PAINTED COMPONENTS



PAINTED PILE BODY



SALT TEST



SURFACE ROUGHNESS



VISUAL & DFT

## PAINTING SYSTEM

1st Coat: Interzone 505 (440 microns)

2nd Coat: Interzone 505 (440 microns)

Total DFT: 880 microns

Application method: Airless Spray



# PACKING & STACKING

All materials are properly packed, protected, and stacked to ensure no damage during the handling process.



Packing and stacking is designed to ensure no painted surface comes in contact with any hard surface.

Spider is used to prevent the pipe from deformation.

Rack is used on loose small components.





# SHIP LOADING





## LASHING CONDITION



## ON-SITE INSTALLATION

