BUILDING AND CONSTRUCTION

# Marion Island research centre

The site is on a remote volcanic island, 1,200 km south-east of Cape Town. It is accessible only by barge or helicopter. The surface area available for construction is covered by muddy mire with a depth of between 1 and 25 m.

Specially-designed mini-piling rigs were used to install over 2.5 km of 102 mm diameter 3Cr12 piles. Grade 3Cr12 stainless steel was selected for the pilings as it could perform adequately in the prevailing conditions.

Grades 304 and 316 stainless steel were used for the balustrades and external fittings. This will ensure the long-term performance of the structure on the remote and rainy island.



LOCATION/ENVIRONMENT MARION ISLAND, SOUTH AFRICA/OUTDOOR

PRODUCT STAINLESS STEEL TUBE AND PLATE

FBRICATION PROCESS FABRICATED BEAMS

GRADE 3CR12, 304 AND 316

SURFACE 2B AND ASTM 1

COMPETING MATERIAL GALVANISED CARBON STEEL

DATE OF COMPLETION GRADE 3CR12 PILING COMPLETED IN NOVEMBER 2005. REMAINING STRUCTURE STILL UNDER CONSTRUCTION.

MANUFACTURING COMPANY PETREL ENGINEERING

MATERIAL SUPPLIER COLUMBUS STAINLESS, BARLOWORLD ROBOR TUBE, TRIDENT MIDRAND STEEL

SOURCE OF INFORMATION SASSDA

REMARKS THE CURRENT RESEARCH BASE ON MARION ISLAND HAS EVOLVED REACTIVELY OVER 54 YEARS, AS DEMAND DICTATED. THE LONG TIME SPAN HAS RESULTED IN THE USE OF VARIOUS BUILDING TECHNOLOGIES IN THE CONSTRUCTION OF THE FOUNDATIONS, BASE STRUCTURES, WALLS, ROOFS AND INTERNAL FINISHES.