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Mast Design Audit Certificate

Mast Reference Type	N600
Mast Description	159m Triangular Tubular Lattice Mast
Mast Type	Guyed
Manufacturer / Supplier	RTS

The tower has been audited to SANS specifications and approved for construction with respect to the following design parameters as detailed below:

Mast Outline GA Drawing No.	New Design
Design Specification	SANS 10160-3:2019
Basic Fundamental Wind Speed / 3-sec Gust	40m/s
Wind Return Period	50yrs
Terrain Category	B
Site Altitude	1000m Above Mean Sea Level
Ground Datumn	0m
Mast Loading	0.5m^2 at Apex of Tower (159m) 0.5m^2 at 156m above NGL (156m)
Mast Deflection	1.0 Degree
Material Grade	S355JR
Bolt Grade	Grade 8.8
Mast Width	600mm c/c between main leg members
Main Leg Members	48.4 OD 4.0t Circular Hollow Section
Diagonal Members	16mm OD Circular Round
Horizontal Members	16mm OD Circular Round
Mast Sections	53 x 3m Sections
Bolt Quantity	9x M12 Bolts between 3m sections
Initial Guy Tension – G1, G2	3kN - Equivalent to 305.91kg
Initial Guy Tension – G3, G4, G5, G6, G7, G8	4.4kN - Equivalent to 448.67kg
Initial Guy Tension – G9, G10	5kN - Equivalent to 509.85kg
Guy Wire – G1, G2	6mm 1800MPa
Guy Wire – G3, G4, G5, G6, G7, G8	8mm 1800MPa
Guy Wire – G9, G10	10mm 1800MPa
Internal Guy Foundation Distance from Mast Centre	39.52m for G1, G2, G3 and G4
Outer Guy Foundation Distance from Mast Centre	105.52m for G5, G6, G7, G8, G9 and G10

This document does in no way relieve the supplier of any of their responsibilities for the structure.

Mike Adair
Pr. Eng
Reg No. 20180486