

This 6 metre antenna boom was designed in compliance with a precise customer requirement and is manufactured totally from radar transparent materials.

The boom is in the form of a jib with a vertical arm extending downwards at the outboard point. The antenna is mounted at the lower end of the vertical arm. The main boom has a pivot point at the inboard end which is mounted on and interfaced with a turntable which supports and provides accurate positioning of a radar antenna in both azimuth and elevation.

The boom is required to provide the absolute minimum of RF deflection, thus enabling the calibration of microwave beam measurement to be undertaken.

The boom was fabricated using GRP tubes to form a lattice structure, at the nodes special joints were designed to enable cross members to be fully bonded to the main tubes forming an integral structure.



Several different types of joint mouldings had to be designed to accommodate the different configurations of joints required in the latticework structure to successfully achieve maximum mechanical strength at each joint position.



## Technical Specification

### MATERIALS

Glass Reinforced Plastic

Tufnol

Rigid PVC Foam

Nylon

Weight 150 Kgs

Dimensions 600 mm x 500 mm x 6000mm

Deflection Antenna Position  $\pm 3$  mm