



Date:1/2/2022

Certificate by the Structural Engineering Department for MMS

This is to certify that the MMS structure drawing of 6, 7, 8, 9, 10 Combination (copy enclosed) supplied by **Junna Solar Systems Pvt Ltd** (Vendor) is evaluated at our structural Engineering Department facility at **Department of Civil Engineering, Indian Institute of Technology Madras, Chennai** and it is found superior to the MMS structure specified in the Specification of Solar Water Pumping System notified by the Ministry of New and Renewable Energy (MNRE) vide F.No 41/3/2018-SPV Division dt 17.07.2019

The following are the changes when compared to the MNRE's MMS suggestive design:

S.No.	Part Name	According to the MNRE MMS	According to the vendor MMS
1	MAIN POLE	139 OD	NO CHANGE
2	SUPPORTING MEMBERS	41 & 33 OD	ISA 45 X 5 MM
3	MAIN TUBE	122 X 61 X 3.6 MM	72 X 72 X 4 MM
4	SIDE TUBE	80 X 40 X 3.2 MM	80 X 50 X 2 MM
5	MOUNTING PURLIN	80 X 50 X 3.2 MM	60 X 40 X 2 MM

These are the following improvements in the MMS design submitted by the vendor over the MNRE's MMS suggestive design: -

1. ACCURACY & THICKNESS OF SUPPORTS IMPROVED
2. MAINTUBE SIZE & THICKNESS INCREASED
3. SIDETUBE SIZE INCREASED
4. MOUNTING PURLIN SIZE REDUCED TO DECREASE THE WIND LOAD.

Note: The lab may attach drawings/calculations wherever needed.

Signature of the head

(Dr.S.Arul Jayachandran)



Structural engineering department