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SUBJECT: COMPOSITE FIBREGLASS CROSSARMS.

Purpose:

Introducing Composite fibreglass crossarms for replacement of metal crossarms.

Reason:

HV metal crossarm are presently being used in Power and Water for overhead transmission and distribution of power. However being conductive in nature, cause the circuit to complete between conductors and Earth through metal pole in the event of Birdage, lightning etc. This increases the outage time as well as shortens equipment life & reliability. Wooden crossarm are considered the best source to avoid such unwanted outages. However, as the availability of wood required for the purpose is becoming scare, emphasis has been made to find suitable alternatives with properties that of wood and have strength equivalent to that of steel.

With the advancement of technology, now it has becomes possible to protrude square hollow sections out of fibreglass, which can be implied for the purpose of crossarm. These crossarms combines the properties of wood and have strength of steel crossarm. A protective film is applied over the fibreglass cross arms in order to make them UV protective. Power and Water decided to use these crossarms in system.

Requirements:

Following HV metal crossarms, currently being used in Power and Water decided to be replaced with their fibreglass variant as per table.

Crossarm type.	Material :- Metal		Material : Fibreglass Stock Code
	Old Stock Code	New Stock Code	
1. EDO	298547	406841	298547
2. Line	298802	406838	298802
3. Termination	298521	406844	298521
4. Truncated Deviation	298513	406835	298513

5. Line to be used with O/H earth risers (Bolted construction).	298620	-----	298620
6. Termination to be used with O/H earth risers.	298612	-----	298620 (Two bolted together)
7. Line to be used with O/H earth risers (Welded Construction).	-----	-----	406880

Stock codes for metal version of crossarms at serial number 1 to 4 are kept as safety stock only. No safety stocks are kept for crossarms at serial number 5 and 6 and only its fibreglass variant is to be used.

Termination crossarm at serial number 3 is for lines without O/H Earth risers. It is basically two line crossarms pre-glued and shall be used whenever load is of strain type (eg. for dead end or at the end of a span etc.). For the lines with O/H earth riser, there is no glued version for the termination and two line crossarm (Serial number 5 or serial number 7) are to be used bolted together depending upon the type of construction (Bolted or welded respectively).

Standard drawings for these crossarms is S01-1-2-10 Sheet 1 of 3 to Sheet 3 of 3. Fibreglass cross arm are provided with UV protective layer and as such they should be handled with care to avoid scratching on the surface.

Implementation:

These crossarms are to be used for all the new, retrofit or replacement works carried out by both PowerWater and contractors with immediate effect, with the exception of existing projects before this bulletin’s release date.