

SUO MOTO PROPOSAL : TRUCK MOUNTED CRANE FOR ULH UNITS

1. Intro.

(a) Regt of Arty is in the process of modernising in a systematic manner. All future med guns are planned to be 155mm/ 39/45/52 Cal, thus, ensuring common 155mm amn sys.

(b) Unlike other cal amn which comes in single rd packages, 155mm amn is palletised. Wt of each shell pallet of 12 rds is approx 620 Kgs and that of each Bi-Modular Ch Sys (BMCS) pallet, with 125 modules is approx 540 Kgs. To load and unload each pallet, mech means are an inescapable reqmt. Thus, there is a need to provide Truck Mtd Amn Cranes on Amn Vehs of med regts with 155mm eqpt.

2. Brief. For better reach in inaccessible areas, 4x4 ALS is preferred as amn veh for ULH units. However, these cranes are not auth/held on ALS vehs. Therefore, considering that the reqmt is inescapable in nature, it is proposed Mtrl Handling Cranes (MHCs) be integrated on ALS for ULH units.

3. Broad Specs.

(a) Crane should be able to handle load of one first line amn at any time and total Wt of a bty 1st line amn of 155mm is approx 40.13 tons.

(b) Both wt & vol of amn are to be considered for loading the in amn veh.

(c) MHC is reqd on each gun for amn handling. 4x4 FATs are neither having any mech means to handle amn nor can it be mounted, due to space constraints. Thus, there is a reqmt of mounting MHC on ALS amn veh at a scale of one veh with MHC per gun. Therefore, six ALS per bty are reqd with MHC.

(d) **Broad Spec** of the Truck Mtd Crane are as under :-

(i)	Rated Capacity	-	2.7 tonnes.
(ii)	Lifting Capacity	-	2.9m-920kg, 3.8m - 700kg & 4.5m - 540 kg
(iii)	Max Radius of Load	-	4.65m
(iv)	Hydraulic Boom Extn	-	1.8 m
(v)	Max Lifting Ht above Crane base	-	6.0 m
(vi)	Rec. Oil Flow	-	10 l/min
(vii)	Working Pressure	-	250 Bar
(viii)	Slew Angle	-	330 Deg
(ix)	Max. Working Heel	-	5 Deg
(x)	Slew Torque	-	3.6 kNm
(xi)	Slew Speed	-	2 RPM
(xii)	Height in Transportation Position	-	1450mm

(xiii) Width in transportation Position - 1450mm

(xiv) Dry Wt of Crane - 340 kg

4. **Tentative Qty.**

(a) No of ALS reqd with Cranes – 06 (one per gun for a bty)

(b) Total ALS with MHC – 6x22btys = 132 ALS with MHC.

5. **Tentative Timelines for Devp/Production.** Suo Moto proposal for mounting cranes on ALS veh was recd from M/s Action Construction Equipment (ACE) Ltd.