

## **Manufacture of DMR-1700 Steel Mill Forms (Sheets and Plates) for Defence Applications through Continuous Casting Route**

DMR-1700 steel is a medium carbon low alloy steel. It is the result of a comprehensive and fundamental study undertaken at DMRL, Hyderabad over a period of nearly two decades to develop a low cost alternative to 250 grade maraging steel (total alloy content ~ 30-35 %) for defence applications. Extensive research has led to the optimization of alloy design and understanding of physical metallurgy of the steel to achieve an excellent combination of ultra high strength and high fracture toughness at room temperature.

The research has been translated at industrial scale through continuous cast route, to make the steel more cost effective, with increased productivity and higher yield. The steel plates of thicknesses 6-80 mm were produced through continuous casting (CC) route followed by hot rolling and heat treatment. The steel plates of higher thicknesses were quenched and tempered whereas low thicknesses (< 10 mm) plates can be air hardenable. The DMR-1700 plates produced through continuous cast route were found promising for defence applications. All the plates showed mechanical properties meeting the specified values for various defence applications. Some of the defence components and systems manufactured using DMR-1700 is shown below in the figure.

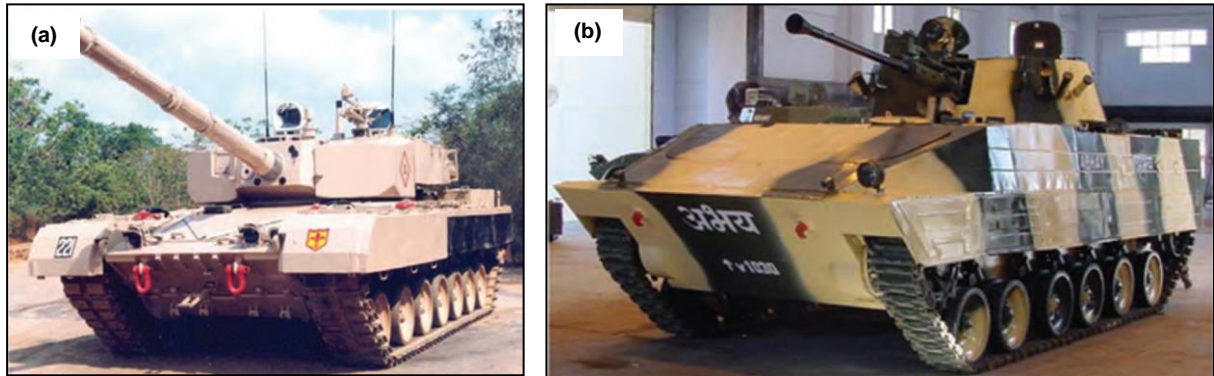


Figure (a) Main battle tank ARJUN and (b) Infantry combat vehicle ABHAY.

Interested Industries are requested to forward their Expression of Interest (EoI) to Director DMRL, Hyderabad with a copy to Director DIITM, DRDO HQ on following address:-

**To,**

**Director  
Defence Metallurgical Research Laboratory  
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Fax: 040-24340683

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**Copy to**

**Director**

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Industries are requested to enclose supporting document in EoI as per Appendix 'D' of DRDO Policy and Procedure for ToT available at **<https://www.drdo.gov.in/sites/default/files/inline-files/drdo%20Policy%20%26%20Procedure%20%20for%20ToT.pdf>**