

# Transfer of Technology of 35m Mountain Foot bridge including its Launching System

## 1. Introduction

A lightweight 35m mountain footbridge (MFB) has been developed at R&DE(E), Pune to bridge clear gaps up to 32m with a pathway of 0.8 m. The bridge is made of high-strength aluminum alloy components such that each component is man-portable and weighs less than 18 kg. It is also capable of withstanding conditions prevailing in glacial regions. The system is made compact considering limited availability of back space during launching in mountain regions. The joints of the bridge facilitate easy assembly in cold conditions. Full bridge can be launched in about 120 minutes with a crew of 30. The time of launch will reduce for shorter spans. The bridge will normally not allow any appreciable accumulation of fresh snow due to provision of gaps in the deck, however bridge is still designed for accumulation of 250mm of fresh snow with a density of 200 kg/m<sup>3</sup>. Bridge can be negotiated by people with a spacing of about 3m. After number of in-house technical trials and UATT, one prototype of this bridging system has recently completed extensive user trials with Indian Army.



Mountain Footbridge

## 2. Launching of the bridge

It includes a man-portable launching system that facilitates the bridge to be launched from near-bank without any access to the far-bank. To launch the bridge, a light weight nose is first launched from near-bank in cantilever mode. After the nose is lowered across the gap, bridge panels are attached to the nose and pushed across the gap.



Launching of Mountain Footbridge

## Expression of Interest

Research & Development Establishment (Engineers), Pune, a premier laboratory under Defence R&D Organisation invites Expressions of Interest (EOI) from original manufacturer(s) having sufficient experience, expertise and willing to undertake production work. The firm should be technologically sound to manufacture and supply the system with requisite quality standards.

Technical specification in brief are as follows –

Type of footbridge	: Truss type, Triangular configuration
Construction	: Modular, suits deployment in variable spans in multiples of 1.5m
Max. length	: 34.5m
Max. clear gap	: 32m
Walkway width	: 0.8m
Material	: Aluminium alloy
Weight of each component	: < 18 kg
Time for launching	: Within 2 hours with 30 men for max. length

Interested parties may respond along with their company profile, financial & technical capabilities etc as per the following format –

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, 1956)
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three year period
- (e) Details of shareholding/ownership pattern especially foreign partners/ shareholders, foreign employees, directors, etc. The company must adhere to the prevailing Govt of India policies and regulations on Foreign Direct Investment (FDI).
- (f) Annual budget for R&D during last three years.
- (g) Numbers and details of IPR or patents etc held by the company.
- (h) Number of technically or professionally qualified personnel.
- (i) Record of past performance (e.g Supply orders executed against of Ministry of Defence orders, public sectors and paramilitary forces, if any.
- (j) Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise.
- (k) List of Testing and Support equipments
- (l) ISO/ ISI certification or any other certification
- (m) Relevant clearances form the authorities/ ministries (if any)

- (n) Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.
- (o) Capacity/Capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.

Eligible parties will be invited to sign Non-Disclosure Agreement with R&DE(Engrs) and for technical discussion including specifications, following which they shall be evaluated for giving Transfer of Technology (TOT) on non-exclusive basis. Criteria for choosing industry partner will include manufacturing capability, assurance on quality and capacity of production apart from other terms and conditions.

Interested industry partner may write to Director, R&DE(Engrs), Pune on the following address -

Director, R&DE(Engrs).  
DRDO, Min. of Defence,  
Alandi Road, Dighi,  
Pune – 411015

They may also contact on phone – (020) 2704 4546 / 2704 4552  
Email : nareshkumardrd2@gmail.com

or

Director, DIITM,DRDO HQ,  
Min. of Defence, DRDO Bhawan,  
Room No. 447, B Block,  
Rajaji Marg, New Delhi - 110011  
Phone – 011 23013209  
Email : radkrishnan@hqr.drdo.in