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HD R&D Field Evaluation: Light Soil Sifter

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UNITED STATES DEPARTMENT OF DEFENSE

HUMANITARIAN DEMINING R&D PROGRAM

Light/Sandy Soil Sifters

Use of commercial beach cleaning technologies for mine and clutter removal, and quality assurance behind mechanical clearance systems

The light/sandy sifting project is evaluating the feasibility and operational suitability of using commercial beach-cleaning technologies to remove mines and clutter from sandy and mechanically prepared soils. The operation of mechanical clearance systems such as flails and tillers can result in a large amount of clutter from destroyed mines, or still active hazardous pieces brought to the surface but not destroyed or detonated.

STATUS

Two candidate systems underwent technical evaluation in 2014

One system has been deployed to Sri Lanka for an operational field evaluation by The HALO Trust. To date, the Beach Tech has verified over 113,800 square meters of land following behind a HALO Trust mine clearing flail system.

The Humanitarian Demining Research and Development (HD R&D) Program is evaluating two commercial beach cleaning technologies; a bed style sifter able to lift mines from 20cm, and a compact rake mechanism capable of lifting mines from 15cm.

Demining applications envisioned for these systems are removal of mines from sandy and other light soils, raking the surface soil to collect clutter, and assisting with inspection and quality assurance behind mechanical clearance equipment.

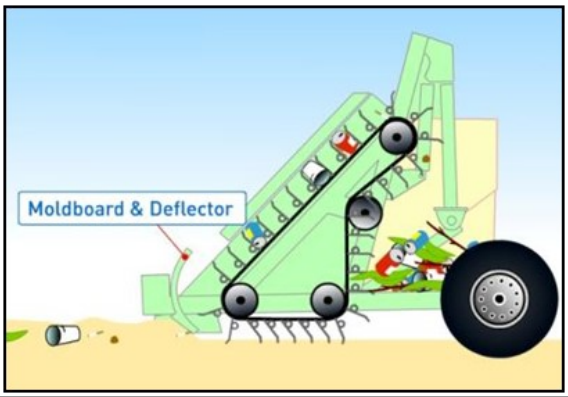
The HD R&D Program conducted a successful technical evaluation of both systems in 2014. The Beach Tech 2000 bed style sifter began an operational field evaluation in Sri Lanka with The HALO Trust in early 2015.

Cutting-Edge Solutions
DEMINING TECH
MINE CLEARANCE & AREA PREP

Distribution Statement A: Approved for public release.

FEATURES

- Lifts and sifts AP mine sized objects and clutter from sandy type soils
- All sifted material deposited in a bin and easily dumped in a designated area for inspection
- Towable by small commercial tractors



Left: Illustration of sifting mechanism. Right: Mine simulant being lifted by the Turf Rake during technical evaluation

Left: Bed style system in Sri Lanka. Right: Rear-mounted receptacle depositing sifted material for inspection

APPLICATIONS

- AP mine clearance
- Clutter removal
- Quality Assurance

SPECIFICATIONS	TURF RAKE	BEACH TEC 2000
Hopper	1.5 cubic meters	1.5 cubic meters
Dump height	2.75 meters	2.6 meters
Tires	36 x 13.5 x 15	
Operating Speeds	Up to 2 kph	Up to 2 kph
Net Weight	1720 kg	1,800 kg
Max cleaning perf	4,000 m^2 / hr	4,000 m^2 / hr
Cleaning width	2.1 meters	1.8 meters
Cleaning depth	Adjustable to 15 cm	Adjustable to 20 cm
Dimensions	H: 7’ 6”, L 13’1”, W 7’6”	H 6’11”, L 17’9”, W 8’7”
PTO shaft speed	540 rpm	540 rpm std, 1,000 rpm alternatively

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