

► DIVISION VEHICLE SYSTEMS

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Rheinmetall presents Mobile Smart Factory for mobile production of spare parts for Battle Damage Repair

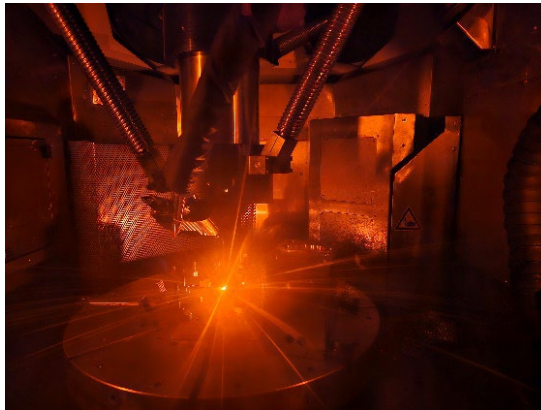
At an event organised by the European Defence Agency (EDA), Rheinmetall presented a new solution for the mobile production of spare parts for military vehicles.

Rheinmetall Landsysteme GmbH, an OEM for tactical and logistic tracked and wheeled vehicles, presented the new mission support concept. The Mobile Smart Factory (MSF) delivers metal 3D printing and postprocessing capabilities and is fully integrated into Rheinmetall's IRIS (Integrated Rheinmetall Information System) digital ecosystem.

The MSF consists of two 20-foot mobile shipping containers, one serving as an office container and the other as a production container. The office container houses an air-conditioned workstation and storage space. A polymer printer and a handheld scanner for quality control is also part of the office container. The production container is equipped with a Metrom P7000, a 6-axis hybrid machine. This machine is not limited to wire arc additive manufacturing (WAAM) technology. With an integrated CNC milling facility, it also enables on-site finishing and postprocessing. The combined welding and CNC capability gives Battle Damage Repair personnel additional options for repairing and overhaul. This is why the MSF also lives up to its name of "Mobile Smart Factory".

The machine can produce components with a maximum size of 700 mm in diameter and 450 mm in height. All weldable wires and polymers can be used. The metal deposition rate is up to 600 cm³/h (cubic centimetres per hour).

What makes the Mobile Smart Factory unique is its integration into the IRIS[®] platform. As an OEM of military vehicles, Rheinmetall understands the importance of secure data exchange and lifelong product monitoring of printed parts, including quality assurance. The cloud-enabled IRISplatform enables the fully integrated operation of the IRISwork and IRISfleet software applications with the MSF, meeting IT security standards up to NATO Restricted. IRISwork provides operators and maintenance personnel with access to technical documentation and spare parts catalogues, while IRISfleet is a fleet management tool that



► Key facts



- New approach to mobile spare parts production
- Mobile Smart Factory is fully integrated into Rheinmetall's IRIS digital ecosystem
- Container based system
- Debuts at European Defence Agency event

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documents the installation of a specific printed part on a specific vehicle. IRISfleet stores all relevant information about the printed part and keeps a digital product passport to ensure system security. IRIS technology also includes access to remote support from industry, engineers, quality assurance, etc.

The collaborative multitenant IRIS platform enables the armed forces and defence industry to integrate partners into a secure network, providing rapidly deployable additive capabilities for the modern battlefield.

