

Engineering and related services

Decommissioning integrator offers the following service in the area of laser cutting:

- data preparation;
- development of engineering design documentation for a remote laser cutting system;
- development of an action plan and sequence of operation steps;
- laser setup;
- supply of local offgas filtering system and process thermal control.

Specification of Mobile laser unit:

Components:	<ul style="list-style-type: none">→ laser source;→ single-channel forming telescope;→ cooling units (chillers);→ ray position control system;→ aerosol complex (if required)
Length of laser beam	<ul style="list-style-type: none">→ up to 300 m – in atmosphere;→ up to 100 m – via optic fibre
Depth of cut	up to 440 mm
Area	12 sqm (block-box)
Continuous operation period	up to 16 hrs
Temperature range	-50°C to +50°C

Company Profile

TVEL JSC is the Integrator of the State Corporation Rosatom in the field of Decommissioning of Nuclear and Radiation Hazardous Facilities and Handling of Associated Radioactive Waste.

56

Rosatom organizations – business participants

>50

 years

of process experience

100+

completed projects in 20 countries around the world

Advanced technologies at every stage of decommissioning:

- preparation for decommissioning;
- infrastructure development;
- dismantling and segmenting of equipment and structural units;
- decontamination;
- handling RAW;
- site remediation;
- final disposal.

Caring for future generations!

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TVEL
ROSATOM

DECOMMISSIONING OF NUCLEAR AND RADIATION HAZARDOUS FACILITIES

SEGMENTING SOLUTIONS

- Mobile laser unit
- Engineering and related services



Mobile laser unit with an aerosol monitoring system for equipment segmenting of industrial facilities

Fields of Application



Nuclear industry

- Segmenting of separation plant equipment.
- Segmenting of reactor equipment (steam generators, condensers, reactor pressure vessels (RPV) at NPP units being dismantled).

Oil and gas industry

- Emergency response, incl. uncontrolled blowout at oil and gas fields.
- Cutting (disposal) and segmenting of large-sized thick-walled steel and building structures (including submarines and ships).
- Destruction of ice formations.

Advantages

- 1 Speed**
Work completed 5 times as fast as segmenting with gas cutting and hand tools.
- 2 Safety**
Reinforced concrete and metal structures are cut at a distance of up to 30 m, while personnel is allocated in the “clean zone” which reduces dose loads of personnel.
- 3 Mobility**
Mobility and a transportation by any transport means.
Quick preparation of the unit for operation – less than 60 minutes.



References

Segmenting of equipment contaminated with radioactive substances



Laser cutting process



Laser cutting results

