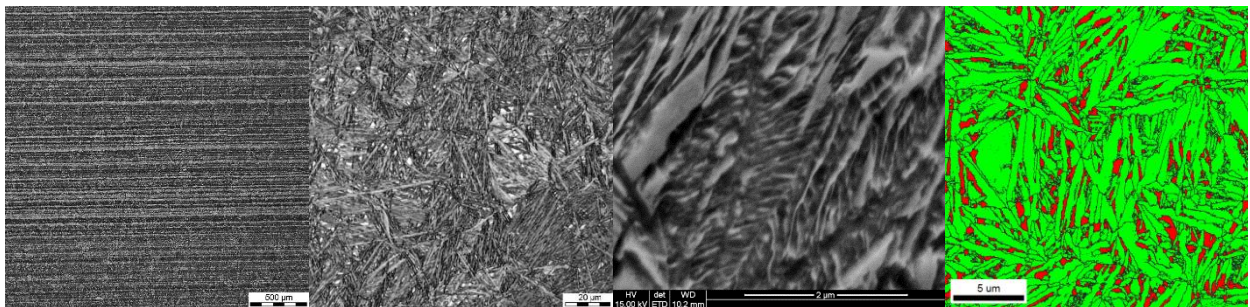


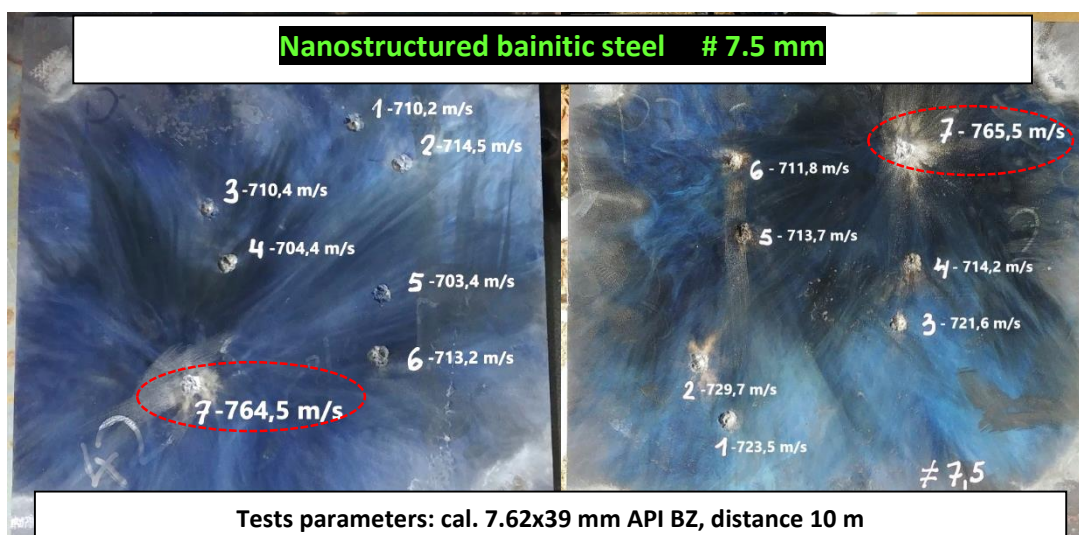
Armour panels with plates of nanostructured bainitic steel

Nanostructured bainitic or nanobainitic steel is a new structural material with the strength in the range of 1.9–2.2 GPa and good plasticity. One of the main applications of ultra-strength nanobainitic steel plates are armour systems.



Microstructure of the nanobainitic steel (light and scanning electron microscopy, EBSD technique)

Level 2 ballistic protection requirements according to the Stanag 4569A standardisation document were met by 7.5 mm thick ULTRA-PAN plates.



Plates made of the nanobainitic steel. Multi-hit firing tests results according to 2 level of Stanag 4569A

Industrial technology production of the nanobainite steel plate was developed, including smelting and casting into ingot moulds, preparation of the rolling mill charge, hot rolling, post-rolling plate processing as well as intermediate and final heat treatment.