Ansaldo STS a Hitachi Group Company proud its technology has enabled Rio Tinto to launch the world’s first autonomous heavy freight rail operation

The successful completion of the first journey of the world’s first fully autonomous heavy freight rail operation by Rio Tinto on 10th July 2018 from Tom Price Mine to the port of Cape Lambert, a distance of 280 kilometres, with a fully loaded train recognizes a six year period of pioneering technical development, engineering and project delivery for the iron ore miner and for rail technology and systems provider Ansaldo STS.

Together, Rio Tinto and Ansaldo STS have developed and deployed the train control solution that will enable the automation of Rio Tinto’s freight rail network in the remote Pilbara region of Western Australia which includes 1,700km of track.

The breakthrough solution is based on the international standard digital radio-based signal and train protection system ATO over ETCS Level 2 (GoA4) which provide fully automated train operation.

In the case of Rio Tinto’s AutoHaul™, each locomotive has been installed with an onboard driver module which generates automatic reports on the exact position, speed and direction of travel of the entire fleet via IP communication to a central control centre in Perth, more than 1,500 kilometres away.

The Office of the National Rail Safety Regulator (ONRSR) approved driverless operations for AutoHaul™ on 16th May 2018 signalling the start of phased deployment by Rio Tinto of the autonomous rail operation, and marking a major milestone for all who have contributed to the project for which the highest safety has been central to each stage of development.

“Ansaldo STS’ primary focus on the safety enhancement of rail management solutions has led to several other development breakthroughs in the past 12 months,” said Michele Fracchiolla, Ansaldo STS President for Freight.

“The successful completion of this world-first fully autonomous freight rail journey from mine to port is a significant step for AutoHaul™ as it progresses towards full commercial operation by late 2018 and is a major turning point for heavy freight rail operators globally.”
“One only need to refer to the degree of change that the introduction of driverless metro has had on mass transit operations in the passenger sector to gain insight into the potential impact that autonomous freight rail management solutions may have in the heavy freight and resources sector,” he said.

“This is an exciting and challenging time for transportation and infrastructure developers globally. The potential for continuous and fast-pace change, supported at all levels by the Internet of Things, will lead to greater integration of systems, the span of autonomous practices will increase, and skills sets needed by our workforce will modify.”

Ansaldo STS a Hitachi Group Company is proud to have played a lead technical and delivery role in supporting Rio Tinto to meet its goal of operating the world’s first fully-autonomous heavy haul, long distance rail operation.