

## **The influence of varying aluminium and manganese content on the corrosion resistance of high strength steels**

### **Corresponding author:**

Jan Hajšman, janh@rti.zcu.cz, University of West Bohemia, Regional Technological Institute, Univerzitní 8, 301 00 Pilsen

### **Co-authors:**

Ludmila Kučerová, Ondřej Chocholatý

### **Abstract:**

Since the high strength steels are typically used in automotive industry, the corrosion resistance represents a very important property of these materials. In recent years there is a tendency of replacing silicon with aluminium and increasing the manganese content in advanced high strength steels. These variations in chemical composition affect not only the resulting microstructures but also the corrosion properties of high strength steels. This paper is focused on the evaluation of the differences in corrosion resistance of steel with varying manganese and aluminium content.

### **Key words:**

steel corrosion resistance, corrosion testing, potentiodynamic test, exposure corrosion test, medium manganese steel

