**Subject: Work on lead- and chromium-6 containing paint layers**

**Location: Site IJmuiden**

Date: 3-4-2019 Date of incident: 20-2-2019

More information: [HSE.Frontoffice@tatasteeleurope.com](mailto:HSE.Frontoffice@tatasteeleurope.com)

**What happened?**

On 20th of February, when removing an old paint layer from the construction of the endurance tap on Blast Furnace 7, chromium-6 was found in the paint layer. It was already established at an earlier stage that the old paint layer contained lead compounds. It was decided to discontinue all work on the entire site involving the release of lead and/or dust containing chromium-6 until the control measures were taken to avoid any risk. Decided the control measures for working on paint systems containing chromium-6 are the same as working for lead. as.

For IJmuiden a Toolbox has also been set up including a protocol to perform a simple and quick test to indicate lead and/or chromium- 6 in a paint layer and with an overview of the mandatory control measures to be able to safely perform all operations on the paint layer.

Various Newsflashes were sent out to inform employees and contractors.



**Findings**

Steel objects are coated with a paint to protect them from corrosion. Particularly in the past, lead-mixing and chromate containing coatings with good corrosion resistant properties were often used. This lead mixture and chromate containing paint is often applied directly to the blank steel as a primer. These coatings are not dangerous as long as they are not released in smoke, vapour or inhalable dust form.

During maintenance and preservation of objects, regular operations are carried out in which dust emission occurs (such as sanding, grinding, drilling, etc.). The released dust particles can, usually by inhalation, end up in the body. The extent to which these lead and chromium-6 containing dust particles are released depends strongly on the type of operation. Exposure depends on the control measures taken.

Lead and/or chromium-6 containing paint is applied on metal structures such as platforms, stairs, storage tanks, A-frames, wheel excavators, crane tracks etc. Until the end of the 90s, lead may have been used as an anti-corrosion primer on steel structures. After that, the company switched to non-lead containing iron or welded metal. From 2013 TS standard S3105601 was in force to repel lead and chrome (VI) containing paint systems. Material analysis is always necessary to be sure whether the paint contains lead or chromium (VI).

**Recommendations**

- Perform a lead and/or chromium (VI) test for every operation on a paint layer where smoke, vapour or dust can occur.

- If the test shows that the paint layer contains lead and/or chromium-6, take appropriate measures.

- If no suitable measures can be taken, a custom solution can be taken in consultation with a safety expert or an occupational hygienist. In the case of a customised solution, it is compulsory to draw up a High Level Work Permit.

- If the paint layer does not contain lead and/or chromium-6, implement the standard control measure with regard to working with inhalable particulates.