



Experiences of Enforcement with authorisation

**Inspection campaign concerning Cr VI
compounds in the sector of surface treatment of
metals in Belgium**

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Introduction

- **Inspection campaign by labour inspectorate from January 1st 2015 until January 31th 2016**
- **Sector of surface treatment of metals**
- **Main objective:**
 - Verifying the knowledge and implementation of regulatory OSH provisions (CA and specific CMD-directive)
- **Specific objective:**
 - Implementation of relevant REACH-provisions regarding protection of workers of professional users of Cr VI compounds
 - Gathering information on actual use, alternatives, awareness of authorisation obligations, future intentions concerning use of Cr VI compounds
- **Including measurement campaign of workers exposure to Cr VI compounds**
 - performed by own Federal Laboratory part of Labour inspectorate ²



Laboratory for industrial Toxicology

- **Part of Department of the supervision on chemical risks within labour inspectorate**
- **Mission: support of labour inspectors of regional offices and department of chemical risks regarding occupational hygiene and REACH/CLP**
- **limited team of currently 8 inspectors occupational hygiene (mainly focused on chemical and physical agents)**
- **Measurements of worker exposure to chemical agents (enforcement and regulatory context)**
 - campaigns and on punctual demand by inspectors under specified conditions (complaint, suspicion of infringement of regulations,)
- **Coordinator of national inspection campaign**



Preparation stage

- **Target group: focus on processes in surface treatment with release of Cr VI compounds**
 - Hard and decorative chrome plating;
 - Chromic acid anodising;
 - Pre-treatments such as chromate conversion coatings;
- **Compilation of target list of companies was difficult due to lack of trustable worker exposure data**
- **Establishment based on:**
 - Information of the Belgian External Services for prevention and (worker) protection
 - Research based on NACE-codes
 - Contact with industry federations and
 - Complementary internet searches
- **Result: list of 100 target companies in Belgium**



Inspections

- **Inspection campaign was announced in advance:**
 - Information was provided via the sector organisations
 - Individual companies were informed about inspection date and procedure prior to each inspection visit by announcement letter
- **Performed by labour inspector of regional office + inspector occupational hygiene in case of measurements**
- **Use of specific questionnaire which covered 9 themes**
 - Presence of chemical agents;
 - Risk assessment;
 - REACH and SDS;
 - Prevention measures;
 - Measures for accidents, incidents and emergency situations;
 - Information and training of workers;
 - Hygienic measures;
 - Health surveillance;
 - Personal Protective Equipment;



Main findings - sector

- **83 companies were visited**
- **Exposure to chemical agents (CMR) is important risk**
 - use of CMR agents in 77 % of visited companies
 - use of Cr VI compounds in 56 % of visited companies
- **Collective and protective equipment:**
 - When plating bath are used: LEV in place
 - Additional measures for reducing exposure also in place in most companies (e.g. surfactants)
 - Positive findings relative to PPE (probable bias due to pre-announced visit)
- **Main problems:**
 - 1 in 2 companies does not possess a written chemical risk assessment (obligation article 3 of CMD-directive)
 - Only few measurements of exposure to Cr VI compounds (only 35 % of visited companies that use Cr VI)



Main Findings – (e)-SDS

- **SDS:**
 - Available and accessible for workers in > 80 % of visited companies
 - General remark: often outdated version
- **Extended-SDS:**
 - Available in only 37 % of the visited companies
 - Only 25 % of employers is aware of obligations when receiving e-SDS
- **Specific focus on e-SDS of CrO₃:**
 - Objective: checking information transfer within supply chain
 - e-SDS available from manufacturer
 - Distributors often forget to pass on Exposure Scenarios (ES)
 - ES not available in Dutch or French language
- **Most used products within sector are mixtures of CrO₃:**
 - Rarely ES for CrO₃ attached to SDS of mixture
 - Inadequate communication of relevant information in SDS of mixture



Main Findings – substitution

- **25 % of the companies were not aware of the inclusion of a number of Cr VI compounds into Annex XIV**
- **Intention for substitution:**
 - 15 will stop the use before sunset date
 - 7 will switch to alternative (before the Sunset date)
 - 11 will continue the use based on authorisation (by supplier)
 - 14 undetermined at time of inspection visit
- **Availability alternatives for Cr VI compounds**
 - Suitable alternatives available or ongoing research for pre-treatments (e.g. conversion coatings)
 - No suitable alternatives available for hard/decorative chrome plating



Main findings – measurements Cr VI

- **Measurement campaign to address current exposure of workers to Cr VI compounds:**
 - Hard and decorative chrome plating
 - Chromic acid anodising
 - Pre-treatments (e.g. chromate conversion coating)
- **No measurements of Cr VI during welding stainless steel**
- **Personal and fixed-point samples taken in 12 companies:**
 - 22 personal samples (within workers respiration zone)
 - 21 fixed-point samples (at location of emission source – plating tank)
- **In most cases of personal sampling the sampling time is representative for a workday (8 h)**



Results measurements

	< 1 $\mu\text{g}/\text{m}^3$	1-10 $\mu\text{g}/\text{m}^3$	> 10 $\mu\text{g}/\text{m}^3$
Personal sampling	45 %	50 %	5 %
Fixed-point sampling	40 %	60 %	0 %
total	43 %	54 %	3 %

- **Important remark:**

- Belgian OEL = 50 $\mu\text{g}/\text{m}^3$ (residual high risk!) → future 10 $\mu\text{g}/\text{m}^3$ (proposal European Directive)
- For comparison: NL & FR = 1 $\mu\text{g}/\text{m}^3$, US = 5 $\mu\text{g}/\text{m}^3$



Conclusions (1)

Regarding (e)-SDS

- **In General: quality and usability of extended-SDS for SME's remains an issue**
 - Improved supply chain communication for Cr VI compounds can help companies to perform a risk assessment under OSH
 - Example: Succinct summary of RMMs and OC's through ES
- **More information and raising awareness on the obligations when receiving and e-SDS is needed**
- **(e)-SDS only for substances > 10 tonnes/year**
 - no e-SDS for the mixtures of Cr VI compounds



Conclusions (2)

Regarding REACH-authorisation process:

- **Important driver for substitution under OSH**
 - Including substances in Annex XIV triggers companies to seek alternatives
- **Conditions imposed in future authorisation decisions can be important driver for introduction of RMM**
 - E.g. lack of Cr VI occupational exposure measurements (introducing monitoring requirements)
- **Facilitates targeted inspection campaigns:**
 - Obligation to notify facilitates identification of users
 - Identification of different uses
 - Creates a level playing field throughout the EU (authorisation conditions)



Future

- **2015 inspection campaign: 'baseline survey' before sunset date**
- **21 september 2017: Sunset date Cr VI compounds**
- **Until known no decision on CTAC consortium application:**
 - Broad application that covers most DU of Cr VI compounds
 - notify the use to ECHA three months from the first delivery of the substance after the commission decision
 - Authorisation conditions?
- **2020 or later: follow-up inspection campaign**
 - Objective: evaluate the progress made in reduction of workers exposure to Cr VI compounds (and other chemical agents)
 - Taking into account the authorisation conditions
 - Authorisation conditions should be enforceable



More information?

- **Report campaign (French version):**
<http://www.emploi.belgique.be/defaultNews.aspx?id=44990>



www.employment.belgium.be

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