

SCAFFOLD's benefit to Mostostal & Acciona

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Industrial Use Case 3: Preparation and use of the construction products containing MNMs at work sites: Building constructions

Location : Toruń, Poland - Construction site of CKK Jordanki Concert hall



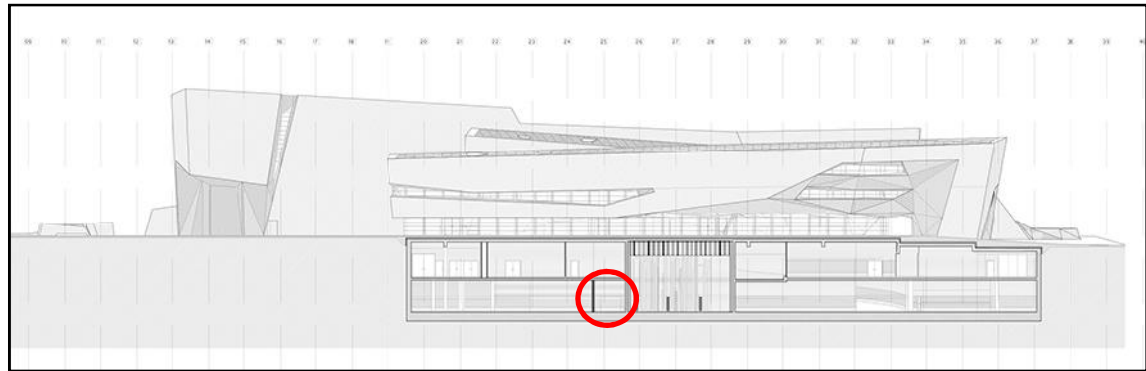
FUTURE



PRESENT

SCENARIO

Exposure scenario – use of the nano-enhanced water and oil repellent as the coating in one of the storage rooms located below ground level.



MNMs: silicon dioxide.

Work done by subcontractor – 2 workers were involved.

3 methods of application:

- brush,
- roller,
- spray gun.



Results and benefits for the Mostostal Warszawa from SCAFFOLD project

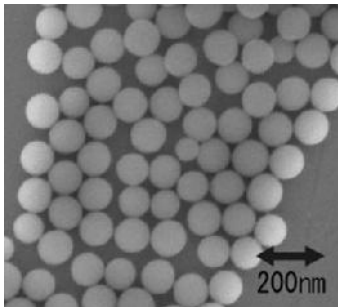
- IUC has proved that integration of RMM into OH&S certified system is easy.
- Results of quantitative risk assessment for application with spraygun impose the use of control management complemented with correct collective protection.
- *“The company gained a vast knowledge about risk management of MNMs during IUC3. Extended information about risk assessment and risk protection can now be used for future safer work with state of art materials. It will allow the company to safely and confidently use materials that aren’t yet widely known and used on our national market.*
- *During the IUC we created a new document that will allow us to hire contractors or subcontractors for work involving MNMs: “Requirements of integrated environmental and OHS management system for work with nanomaterials”. This document implements the Scaffold results into the current management system in the company”.*
- *Potentially it can lower costs of use of these novel materials and add the enterprise an advantage in the very difficult and competitive construction sector.*
- *Additionally gained knowledge can be used for generating revenue from consultancy about risk protection and prevention in use of MNMs on Polish market.*

Use Case 4: Preparation and use of the construction products containing MNMs at work sites: Civil Works.

- Exposure scenario: ACCIONA's machinery workshop
- 4 operators involved in the work



- MNM: n-SiO₂ supplied in form of aqueous suspension
- NEP: self-compacting concrete (reduction of pores, improvement of rheology and durability)



Benefits for the company

The use of the SCAFFOLD tools was beneficial for the performance of the Industrial Use Case at ACCIONA by several means:

- *Communication and awareness actions: the employees implied in the work were aware of the materials that they were handling and the associated potential risks*
- *Risk prevention actions: the onsite manager as well as the personnel in charge of the risk prevention plan were also aware of the potential risks of the used nanoadditive and could carry out their work more efficiently and in a safer way*
- *Use of new tools: the toolkit as well as the best Practices Guides are at the disposal of the all the above mentioned employees and will be used, if needed, in further works*



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