

High-pressure water jetting in lofty heights: Jura-Cement-plant's smoke stack gets a general over-haul

Approximately 125 metres high is Jura-Cement's plant chimney in Wildegg (Switzerland). It is considered to be Canton Aarau's second tallest edifice. The smoke stack, having been built in 1965, badly needed maintenance repairs, as decomposition of the building's foundations had reached a stage, where the reinforced steel mats of the concrete structure was already partly exposed.

ARGE Betosan AG and Rothpletz, Lienhard + Cie AG were commissioned with the reconstruction of the concrete tower. Six months were estimated or completing the smoke stack overhaul. Regarding the high-pressure water jet works Betosan AG awarded the contract to specialist company StoneCleaner AG, which had already been using falch-machines successfully since two years. In March of 2006 the chimney was completely scaffolded. A transport lift as fitted to the outside. It propelled workers and materials 125 metres upwards within ten minutes. The unique scaffold offered safe working conditions up to a force of 10 on the Beaufort scale. It weighs about 45 tons. In April, high-pressure water jetting began. At the start, all top layers coating the chimney were removed. Stone-Cleaner employed two 2500-bar-machines *falch T25*. The rotor nozzle *falchpointspeed 25 three* completely decoated 2.000 m² within eight days. After removal of the concrete surface, heavy damage due to weathering became visible. The inner concrete was partly cracked and especially in the higher regions reinforcing irons were corroded, this needs completely exchanging old for new. Therefore the corroded steel mats had to be laid open. About 4.000 running metres reinforcing steel was tended to during this second step. Managing director Hanspeter Lustenberger of StoneCleaner AG was very pleased: „The *falch T25* enabled us to save 30% on time. We had absolutely no shutdowns on the machines used.“ Since two years the 2500-bar-system *falch T25* has been introduced on the market successfully for industrial cleaning and servicing maintenance of structures made from concrete. *falch T25* is the most sophisticated high-pressure water jet system of its class. The integrated water supply tank enables users to conduct test jetting and thus secures their calculations. In comparison with other methods, falch-technology is very often more cost-efficient, effective, and guarantees faster on site processing. Quick access to the compact aggregate allows for weather-independent use and also enables to employ the system successively step by step. Thus, construction companies are flexibly positioned as to react to any requirements posed by subsurface preparations or even may open new opportunities and gain new commissions.



2 x 2500 bar operating pressure to free 2000m² steel reinforced concrete walls from top layers

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