

# Exit BaP for cold heading operations

Since 2015, concerns about PAHs and BaPs have been quite current in the metalworking industry. Indeed, some petroleum-based products, such as process lubricants, can release PAHs and BaP under severe operating conditions. For greater vigilance, the French Health Insurance authority issued a recommendation, reference R.451, concerning the "Prevention of chemical risks caused by cutting fluids". It uses the data provided by the INRS\* on the risks and thresholds related to BaP contained in new and in-service neat cutting oils.

While this issue is regularly raised when using machining neat oils, there are no recommendation for cold heading operations. Guided by its HSE and CSR convictions, CONDAT decided to go a step further by taking into account this question and by anticipating the regulation.

## Capitalized know-how

With in-depth knowledge on how to reduce PAHs/BaPs in in-service machining oils, that led to the development of NEAT GREEN oils - new generation machining oils that do not show any increase in BaP content after 1,500 hours of machining - CONDAT took the lead and requested its R&D laboratory in early 2018 to work on new formulas for cold heading oils with neutral impact in terms of BaP. Beyond its CSR commitment, the company also wants to address the concerns of automotive suppliers and provide its customers with the safest possible products. The objective was to co-develop with major automotive groups a high-performance product for very difficult forming operations.

After 6 months of research, the EXTRUGLISS HT 268 VP was born. In partnership with a first grade automotive supplier, the product has been tested for nearly 12 months on cold heading operations for the manufacture of seat pinions and hubs, and showed very good results.

## FOCUS on EXTRUGLISS HT 268 VP

Available for sale since June 2019 and following the success encountered with this partner, EXTRUGLISS HT 268 VP is positioned as a premium product specially formulated for extreme operations that generate excessive heat (stainless steel, alloy steel with high elastic limit...). Developed to solve BaP emissions problems, this neat cold heading oil is formulated from high quality, highly refined base oils; it contains fewer residual compounds that may degrade to PAH. Much more stable and pure, it resists to oxidation, increases the life of the baths and facilitates degreasing by preventing the formation of sticky residues on the parts. Less volatile, it limits oil evaporation and mist generation, thus improving the atmosphere in the workshops.

Highly additived formula, it offers high level performance for all difficult operations on hard metals such as stainless steel and alloyed steel.

This dual-purpose cold heading oil, which provides both superior lubrication characteristics to the mechanical components of cold heading machinery as well as outstanding lubrication for the deformation operations, has a viscosity of 68 cst and thus meets the standards of the largest cold heading machine manufacturers. ■

\* NRS Institut national de recherche et de sécurité - French National Research and Security Institute



## HAP / BaP : Tell me more

PAHs, also called polynuclear aromatic hydrocarbons, form a family of numerous compounds (benzo[a]pyrene, anthracene, naphthalene...). 16 PAHs are routinely analysed and have been defined as carcinogenic. One of the most toxic and best known is BaP benzo[a]pyrene. It serves as a tracer for the analysis of PAHs because it is found in an almost constant proportion: the concentration in PAHs is 10 times that of BaP.