

Mold Risk in Factories - A case study of metal products manufacturer

I - Introduction

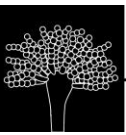
Due to mold's growth properties, given the presence of environmental conditions with a suitable temperature, humidity and nutrient source, any type of product is at risk of mold growth, including metal products. Metal factories are particularly susceptible to mold risk due to factors such as storage of raw materials in humid areas, damp production environments, and improper storage of finished products. In high humidity production environments, mold can rapidly multiply, creating a nutrient-rich microbial ecosystem and accelerating the likelihood of mold formation.

To effectively control the mold risk of metal products, metal factories should carefully assess their manufacturing processes, ensure that environmental conditions are maintained within appropriate ranges, and monitor mold sources. YCM Mold Research Center (MRC) can identify potential mold risk sources, and provide improvement recommendations. This helps reduce the mold risk of their products and also

minimizes the potential compensation losses resulting from quality issues.

Due to the variations in production processes, local climates, personnel, facilities, and other factors across different industries, each factory may have unique mold risk sources. YCM MRC possesses extensive experience and specialized expertise, enabling us to provide comprehensive mold risk assessments tailored to the specific needs of various industries and factories.

Recently, Brand B has expressed interest in understanding the mold risk in its metal product manufacturing facility. Although metals themselves are not easily affected by mold, during the manufacturing, processing, or storage processes, metal products can still be contaminated by mold if there is inadequate environmental control or improper handling. To address this concern, Brand B has collaborated with YCM to undergo a professional analysis and assessment of the mold risk in their factory processes, aiming to control the risk and minimize potential losses.



II - Result

Brand B's metal product factories have an overall moderate mold risk, with higher risks identified in the raw material warehouse and production line (Figure 1).

After analysis, it was found that the factory has a high concentration of *Trichoderma* spp.

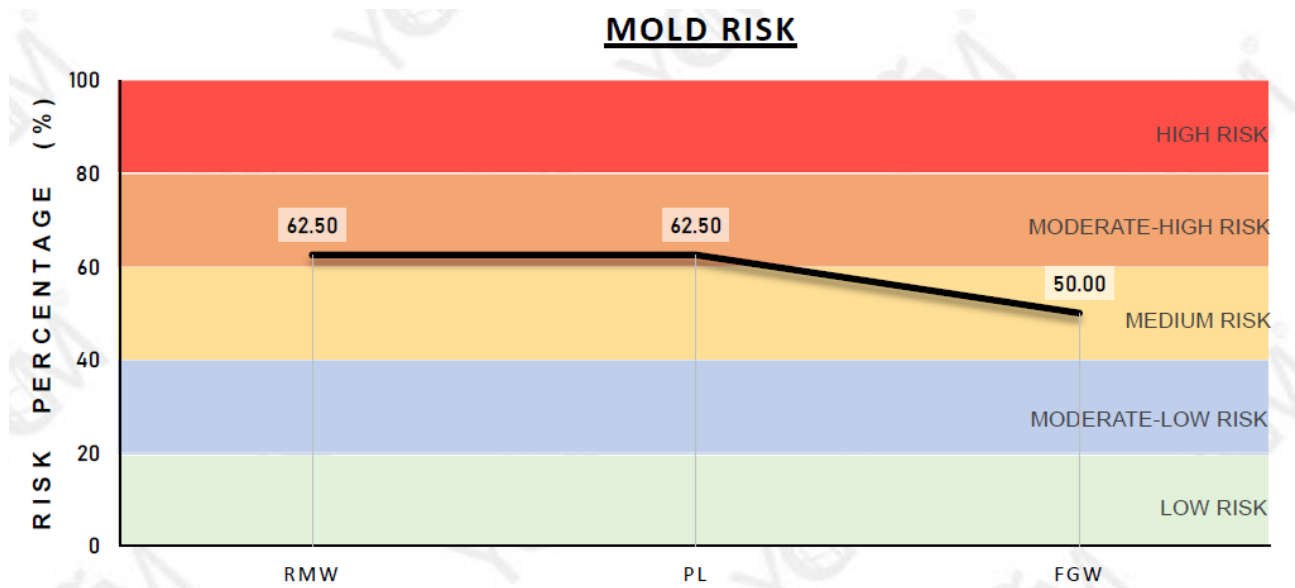
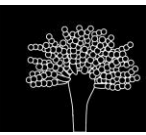


Fig 1. The mold risk in Brand B's metal product factories



III 、 Conclusion

Mold remains invisible to the naked eye during its dormant phase, but it can cause visible contamination in products when left unnoticed. Therefore, professional testing and analysis are essential to assess the risk. YCM MRC possesses specialized knowledge and extensive practical experience in mold, enabling us to assist numerous factories in improving their production areas and reducing mold risk. This is particularly common in high-risk industries such as footwear and apparel manufacturing.

During the on-site inspection conducted by YCM MRC at Brand B's metal product factory, various environmental and microbiological parameters were collected and analyzed. The assessment revealed a moderate mold risk level at the factory, with the presence of high concentrations of *Trichoderma* spp. and other microbial species. *Trichoderma* spp. thrives in environments with temperatures between 20 to 30°C and relative humidity above 70%. It can grow in various

settings and once the factory environment meets its favorable conditions, it can lead to contamination in the production process and finished products. Moreover, these mold spores can cause discomfort to individuals in the area.

As a result, Brand B's metal product factory needs to scrutinize its manufacturing processes and implement environmental control mechanisms and standards based on the recommendations of YCM MRC. This will help mitigate mold risk, ensure product quality, and safeguard the well-being of personnel.

By implementing effective quality management strategies, factories can reduce the quality issues and compensation losses caused by mold contamination. Early identification and resolution of potential mold problems can not only enhance product quality but also strengthen the company's reputation and competitiveness.