

## Abrasive blast cleaning, key surface preparation stage in saving money and mitigate the failure risks of coatings used in pipelines transportation systems

The abrasive blast cleaning is a mechanical treatment process mentioned in ISO 21809 1/2/3 standards. It is used for surface preparation of metallic pipes, prior the primer coating application, in general, an epoxy one. The binding between the metallic substrate and the primary coating has a crucial importance on the integrity of the entire protection system of the pipes, regardless the coating system implemented.

In the pipe coating industry is accepted as a general guidance that 75% of the coating system performance is related to surface preparation and coating application. For the latter one, the general requirements, the best practices and the testing methods are in the limelight of the stakeholders involved in the pipe coating industry, while the surface preparation ones are less familiar, despite critical influence on the forward coating system behavior.

In this paper will be highlighted the main surface preparation working specification checkpoints, with a particular focus on the synergy between the blasting media features and blasting machines operating conditions. The abrasive blast cleaning process fixes the foundation for the mechanical and the corrosion resistance properties of the coating system. The absence of contaminants, the monitoring of the roughness values, the cleanliness and the dust levels, the soluble salts thresholds prior primary coating application are determined by the initial preparation and by the abrasive blasting process of the steel substrate. The finetuning of these surface preparation key parameters plays a major role on the economics and the lifetime of coating systems used in pipelines transportation systems.



### ABOUT THE AUTHOR

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Claudiu Ionescu is Group Portfolio & Innovation Director at Winoa. He holds a PhD in tribo-corrosion from CentraleSupélec - Paris, France, with previous experiences in product development and innovation in a multicultural & multidisciplinary environment. The voice of customer together with the synergy between technical and business development challenges represents the main working center of interests for Claudiu.