

SUMMARY

All engineering cases and problems have multiple solutions with a handful of optimal ones. Use of abrasive in surface pre-treatment is no different. I have seen many blast operations that operate with a particular type and size of abrasive because "that is how it has always been done." Change is seldom openly embraced. It takes considerable effort from both the supplier and end-user to initiate and effect change. Cost and process justifications have to be considered carefully and in conjunction with the other.

Ultimately, the DFT (dry film thickness) of a coating, and its uniformity and life validate the quality of the pre-treatment process. Similarly, the thickness and bonding strength of the thermal spray will be determined by the effectiveness of the grit blasting process in presenting a suitable surface profile for the process. Since no single abrasive can provide a universal solution for all coating applications, explore to find the one that will result in the most suitable fit in cost and effectiveness. ●

About Kumar Balan

Kumar Balan is a shot peening and blast cleaning technical specialist. He assists industry leaders achieve business growth in North American and overseas markets. His expertise is in centrifugal wheel- and air-blast cleaning and shot peening equipment. Kumar has published many technical papers on blast cleaning and shot peening and is a regular contributor to *The Shot Peener* magazine.

Kumar is a speaker at industry conferences and training seminars worldwide. He is also a Lead Instructor for EI Shot Peening Training at their international seminars and workshops. Please email him at kbalan13@gmail.com.

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4th International Symposium on Fatigue Design and Material Defects

May 26-28, 2020 in Potsdam, Germany

FOLLOWING the successful symposia in Trondheim in 2011, in Paris in 2014 and in Lecco in 2017, the conference chairpersons announce the 4th International Symposium on Fatigue Design and Material Defects from May 26-28, 2020 in Potsdam, Germany.

Material defects such as non-metallic inclusions, pores, micro-shrinkages etc., play a crucial role in fatigue crack initiation and propagation which in turn has significant consequences for structural integrity in terms of lifetime, fatigue strength and other characteristics of cyclically loaded components.

The main objectives of the symposium are to improve the understanding of the mechanisms and the impact of defects on structural integrity, and to work out measures to improve the fatigue properties of materials and components.

To that purpose presentations are welcome which address the following topics:

- Defects and manufacturing processes
- Defect detection and monitoring
- Statistical considerations
- Defects and fatigue strength
- Short fatigue crack propagation starting at defects
- Critical defect sizes
- Defects as root causes of structural failure
- Modelling fatigue life and strength taking into account defects

All materials are concerned, particularly:

- High-strength steels
- Cast aluminium alloys
- Nodular cast iron
- Sinter materials
- Weldments
- Materials generated by Additive Manufacturing

To submit your abstract, go to <https://fdmd2020.inventum.de/registration/registration>. The deadline is October 31, 2019.

The symposium will be chaired by Prof. Dr. Uwe Zerbst and Dr. Mauro Madia with BAM (Bundesanstalt für Materialforschung und -prüfung). BAM is a senior scientific and technical federal institute with responsibility to the Federal Ministry for Economic Affairs and Energy. BAM is located in Berlin, Germany. ●