

Process Securing

Volker Schneidau is an energetic advocate for using wheel blast technology to achieve complete process reliability in shot peening and blast cleaning. As Sales Manager for SCHLICK roto-jet, a member of USF Surface Preparation Group, he is an important component of the SCHLICK roto-jet team that is successfully meeting the demand for innovative wheel blast systems to leading automotive firms in Europe such as Daimler-Chrysler, Volkswagen, Ford and General Motors.

Volker shared with workshop attendees an extremely well-done animated presentation on "Process Securing". The presentation covered the benefits of SCHLICK roto-jet's process reliability package that offers these decisive advantages:

1. Minimization of machine's downtime

SCHLICK roto-jet has developed an innovative solution to lost productivity and downtime—a complete turbine cabinet that can be uncoupled from the blasting cabinet. Because the turbine cabinet is on a transport car, it can be replaced quickly with a back-up terminal when repairs or maintenance are necessary.

2. Control of the blast pattern at different abrasive throwing speeds

An automatic adjustment system corrects the



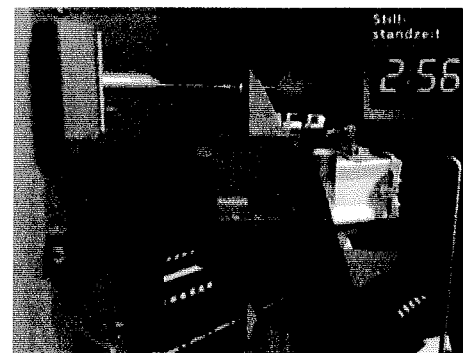
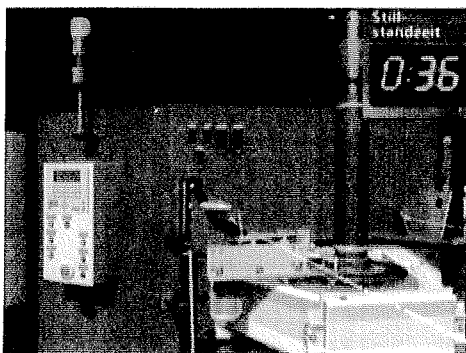
Providing "customer specific solutions for special challenges" is Volker Schneidau's mission as Sales Manager for SCHLICK roto-jet.

position of the guide channel. The position of the guide channel is stored in memory as a function of turbine speed. Because of this, the position of the blasting pattern remains constant even at different abrasive ejection speeds.

3. Control of the blast pattern with compensation for wear

The position of the blast pattern is not only dependent on the speed of the turbine but also the degree of wear to the guide channel. The degree of wear is displayed on the operator panel and a warning light signals the final stage of the wear process. Inadequate or unprofessional maintenance in this area has led to minor catastrophes.

By using a patented multi-level system, the current level of wear is automatically monitored and compensated for by adjusting the position of the guide channel. Resources needed to maintain, adjust, and control the blast pattern are reduced to virtually zero.



Scenes from SCHLICK roto-jet's animated presentation on Process Reliability - Minimization of machine's downtime: The complete turbine unit can be uncoupled from the blasting cabinet and rolled away on its own transport cart. A back-up terminal can be connected immediately and therefore downtime is reduced drastically.

4. Control of throwing blade's wear

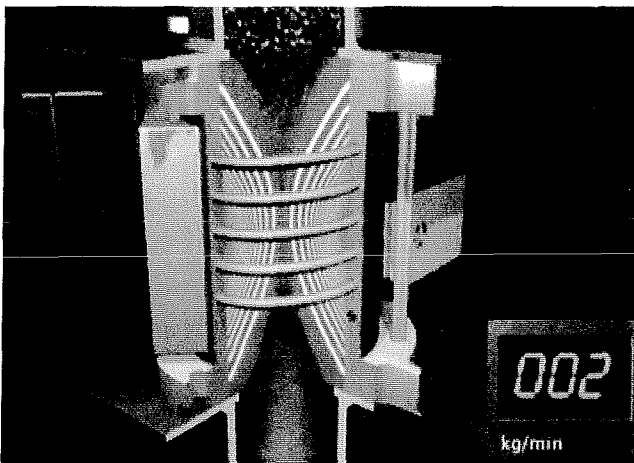
Badly worn turbine blades hinder the even flow of abrasive which prevents a perfect blasting result. Experienced maintenance technicians recognize this by using their hands to sense the increasing turbine vibration caused by the unbalanced mass of the turbine blades. An electronic vibration sensor can replace this procedure. The sensor sends a corresponding signal to the control unit when the vibration reaches a pre-set maximum level. This technology is not meant to replace visual inspections but it can increase intervals between inspections.

5. Adjustment of abrasive amount kg/min

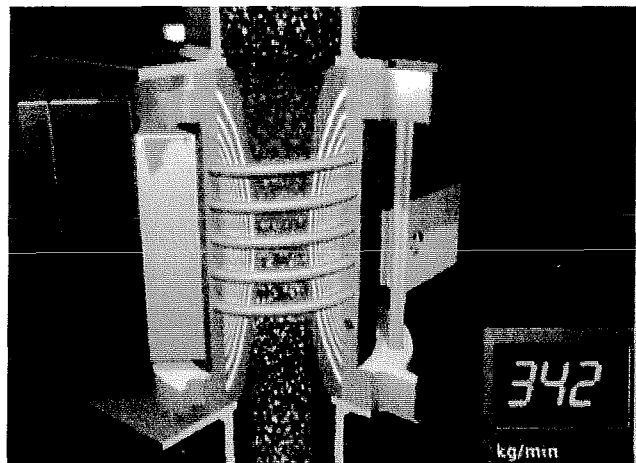
When the blasting unit is not in operation, a permanent magnetic field closes off the flow of abrasive. During operation, an opposing pulsating electro-

magnetic field is created. This weakens the permanent magnetic field and opens the flow of abrasive. The flowing abrasive causes measurable changes in the magnetic field that serve as regulating variables and is shown on the display. The amount of abrasive is pre-set by the control system in kg per minute and is kept constant with a tolerance of approximately $\pm 1\%$.

Wheel blast systems have always had the advantage of energy efficiency over air systems but have had the reputation of being noisy, dirty, dusty and lacking in quality control. Volker makes a convincing presentation for SCHLICK roto-jet's new generation of wheel blast machines. These systems bring the energy efficiency of wheel blast machines into a controllable, clean and automated process that is an ideal solution for even the most demanding industries.



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