Coated ware transfer plates provide cost benefits for USA producer

According to Erica Jaspers, the installation of specially coated ware transfer plates has resulted in measurable cost savings for a leading glass container factory in the USA.

It is often difficult to measure precisely how changing a component in the hot end ware handling set-up affects overall production costs. Improved ware handling can be seen as bottles are better aligned, more stable and more accurately moved into the lehr. However, assigning a finite number to the visible improvement can be difficult.

Several years of testing have confirmed that FortiPhy coated plates have a positive impact on production costs. This can easily be seen in the much longer service life that FortiPhy coated plates provide over stainless steel and other plate types with standard coatings. Longer service life translates into lower labour costs because of reduced maintenance and less downtime due to fewer plate changes during production.

It is not just the longevity of the plates that reduces production costs, however; it is also a matter of how the plates improve the transfer of containers and reduce the number that are lost during production, hence improving pack rate. In a study completed by Brent Volk, Research and Development Manager - Six Sigma Black Belt at US wine bottle manufacturer Gallo Glass, it was concluded that the installation of a FortiPhy coated plate on one line increased that line’s pack rate by 0.7%.

Mr Volk completed this study with the goal of reducing the amount of ware lost at the 90° transfer (due to friction), increasing the life of the ware plate, reducing downtime associated with plate maintenance and improving bottle quality as it transferred across the ware plate. He tracked the number of bottles lost at the 90° transfer before and after the FortiPhy plate was installed. After the installation, the number of bottles lost at the 90° transfer was reduced by 68.2%, thus resulting in an increased pack rate of 0.7%.

Wear transfer plates previously installed on this line would wear down and become too thin, causing the bottles to drag or stick to the plate. The FortiPhy coating has an extremely low coefficient of friction, which enhances the transfer of containers from one conveyor to the next.

As Brent Volk is keenly aware that an improvement in pack rate is directly correlated to certain financial savings, he was able to determine exactly how much the company saved in energy costs by installing a FortiPhy transfer plate. This amount was significant, considering the minimal investment required – one wear transfer plate – to achieve this savings.

This improved pack rate is in addition to the FortiPhy coated plate providing a longer service life and reducing the downtime associated with plate maintenance. The steel plates previously used on the line provided a service life of three-four weeks, whereas the FortiPhy plate provided a lifetime of over 12 months; a minimum of 12.5 times longer service life.

In a separate trial conducted by Sheppee International on its ware handling equipment, it was again confirmed that FortiPhy coated plates perform with outstanding measurable results. The factory where the trial was conducted produces heavy, large glass containers and standard steel plates and other coated plates were wearing out in two-three weeks. A FortiPhy coated plate was installed and ran for three months before it was removed from the production line, offering a minimum of a 4.5 times longer service life. Sheppee International is now looking at other opportunities to introduce the superior performing coated plates to its high speed lines.

The FortiPhy UltraEndurance coating is a superior coating available to glassmakers. It is self-lubricating and corrosion-resistant, making it an excellent choice for the production line. The nano-ceramic coating is applied with a patented plasma arc acceleration process that is only performed by Phygen Coatings Inc. This patented process creates a coating with an extremely high adhesion level that does not crack, chip or flake under load. It is considered the best choice for glassmakers wishing to reduce production costs and improve pack rates.

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ABOUT THE AUTHOR:
Erica Jaspers is Global Manager/ Sales & Marketing at Dura Temp

FURTHER INFORMATION:
Dura Temp Corp,
Holland, Ohio, USA
tel: +1 419 866 4348
e-mail: sales@duratemp.com
web: www.duratemp.com