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## Low-emission, multiline, quality bar quenching and tempering lines: Danieli Olivotto Ferré multiline solution maximizes production capacity and final product quality

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The latest trends in the premium automotive steel bar market focus on meeting the highest quality standards demanded by end users. Achieving these targets relies heavily on advanced heat treating technologies, which are crucial for attaining the desired metallurgical and mechanical properties. These new technologies must also contribute to reducing fuel consumption and emissions.

The new Danieli multiline system, featuring inclined and shaped rolls, enables continuous rotation of bars during their handling inside the austenitizing furnace and the quenching machine. This continuous rotation enhances the homogeneity of the bars and minimizes the risk of deformation.

This innovative solution is further optimized by strategic arrangements of burners in the furnaces and water or water/polymer spray nozzles in the quenching machine. These adjustments ensure excellent treatment uniformity, resulting in a high-quality final product.

Danieli's proprietary hydrogen-ready burners and combustion design system offer a significant reduction in fuel consumption and emissions. Specifically, this system achieves a 25% reduction in fuel consumption and emissions, with the potential for carbon emissions to reach zero when using 100% hydrogen.

Currently, two lines featuring this cutting-edge technology are operational, consistently producing treated bars that exceed EN 10083 requirements. A third line is currently in the engineering phase, promising to further enhance production capabilities and quality standards.

In summary, these innovations not only meet stringent end-user requirements but also contribute to environmental conservation by significantly reducing fuel consumption and emissions. The integration of advanced heat treating technologies and hydrogen-ready combustion systems in the premium automotive steel bar market is setting new benchmarks for quality and sustainability.

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