

After Sublance Systems had opened the door to online process control for BOF Plant Operators around 1980, many such systems were installed. Since then, developing economies have seen their respective steel industries grow and the many greenfield BOF Plants that were built were largely fitted with Sublance–Based Process Control Systems. In these cases, the BOF Plant design could be optimized for the inclusion of the associated hardware.

After three decades, some of the original systems may require upgrading or revamping and some existing plants of that age that were not equipped with Sublance–Based Process Control in the past may still benefit from a retrofit. In these brownfield situations, however, restrictions may exist that make it considerably difficult or seemingly impossible to install Sublance Systems or upgrade existing systems to modern day capability.

This article presents a number of retrofit and upgrade projects of the past decade, such as:

- *The replacement of a relatively recent but underperforming western supply Sublance System in China, where the BOF Plant design was optimized for the initial system, but where an improved system could be retrofitted after careful review of the existing situation and slight customizing of the design for the new system.*
- *The design of a number of Sublance Systems for a BOF Plant in North America, upon which exceedingly stringent space restrictions were imposed. The system had to allow for an exceptional path of movement of the existing oxygen lances and accommodate a number of unusual plant layout aspects. Some ducting in the plant was redesigned as well.*
- *The installation of Sublance Systems in BOF Plants in India where no room was available for slewing or side–shift type systems given the client’s desire to have easy access to the oxygen lance. A novel design was developed, eliminating the traditional winch platform by basing the design on a vertical lifting movement, leading to a substantially lower weight for the entire system. The counterweighted arrangement, similar to that of for example oil well pumps or classic drawbridges, gave the system greatly improved mechanical stability.*

These cases illustrate the retrofit and upgrade capability of Sublance Systems from a mechanical standpoint

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