



## Continuous optical temperature measurement in the BOF

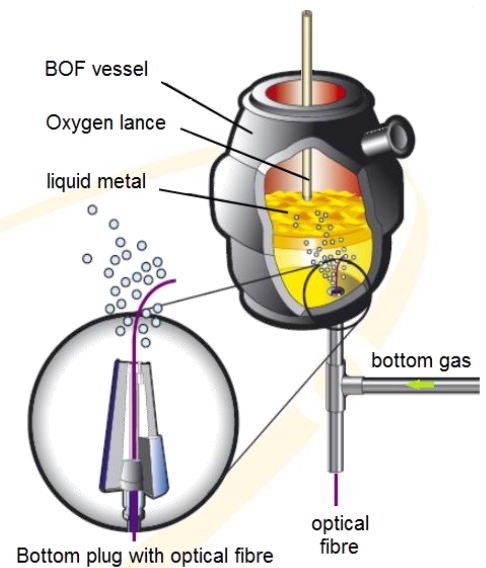
The MINKON DynTemp® technology was developed jointly with our innovations partner BFI. It is a revolutionary method for providing continuous temperature measurement and is suitable for many molten metal applications. MINKON DynTemp® is based on feeding an optical fibre continuously into the molten metal. Thermal radiation is simultaneously transmitted to the remote measuring device and allows for exact 'real time' temperature control throughout the process.

### Cost effective process control.

One major source of productivity loss in BOF steel making is the increase of tap-to-tap time due to insufficient bath temperature. Although required oxygen amount and blowing time are calculated by sophisticated models there is too often a significant variation between estimated and real bath temperature.

The MINKON DynTemp® feeds the consumable optical fibre through the bottom gas system into the liquid steel bath. The system measures the actual steel bath temperature during the blowing process to determine accurately the required end blow point.

The continuous measurement system enables the operator to monitor the actual temperature development directly. The measurement can be used either continuously or at selected times of interest. Operational trials showed a significantly improved precision compared to the bath temperatures controlled by static charge model.



#### Main benefits are:

- Short response time (< 0,1 s)
- Continuous online monitoring
- Easy application
- Improved process control
- Raising output
- Savings in oxygen consumption