• Reduced need for maintenance with resistant composite tubes

3300ton ds/d
515C/106bar
COMPOSITE (COEXTRUDED) TUBES

- Two materials joined in one tube
- High alloyed for flue gas
- Low alloyed steam side
- Metallurgical bond for thermal transfer

- Outside dia 31 to 76,2mm
• Reduced need for maintenance with resistant composite tubes

• 10 years operation in SCA Östrand Recovery boiler has verified safe operation with these tubes
• Reduced need for maintenance with resistant composite tubes
• 10 years operation in SCA Östrand has verified safe operation in Waterwalls and in Floor, Sanicro38

750mm above primary airports
• Reduced need for maintenance with resistant composite tubes
• 10 years operation in SCA Östrand has verified safe operation in Waterwalls and Floor Sanicro 38 and Superheaters Sanicro 28
CONCLUSION

- SANDVIK COMPOSITE TUBES contributed to increased efficiency in Recovery Boilers increase from 80bar/480°C to 106bar/515°C = +10-11 MWel assuming 20€/MWh => 1,6 M€/year

- COMPOSITE TUBES Sanicro38 / > 100km in floors  20 full installations Tubes in first full floor, Metsä Rauma F 1996, in excellent shape after 19 years service!

- COMPOSITE TUBES Sanicro28 and 310 > 100km in superheaters, 20 larger installations Tubes in SCA Östrand in excellent shape after 9 years operation!

- COMPOSITE REDUCE NEED FOR MAINTENANCE