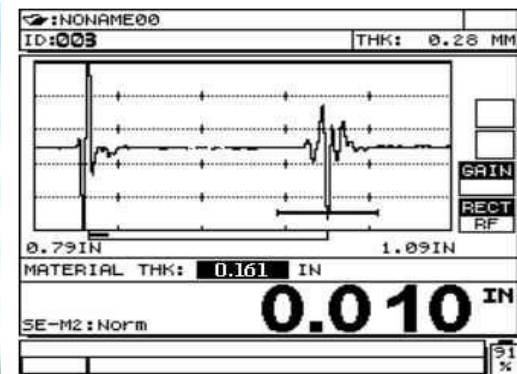


The very high temperatures found inside steam boilers (in excess of 1000⁰ F or 500⁰ C) can cause the formation of a brittle iron oxide called magnetite on the inside and outside surfaces of steel boiler tubing.



Steam side:

Water vapor will react with the Iron in the steel to form magnetite and hydrogen according to the formula:

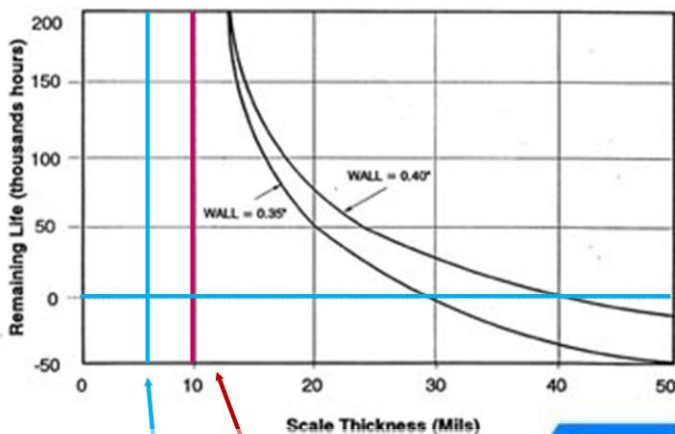
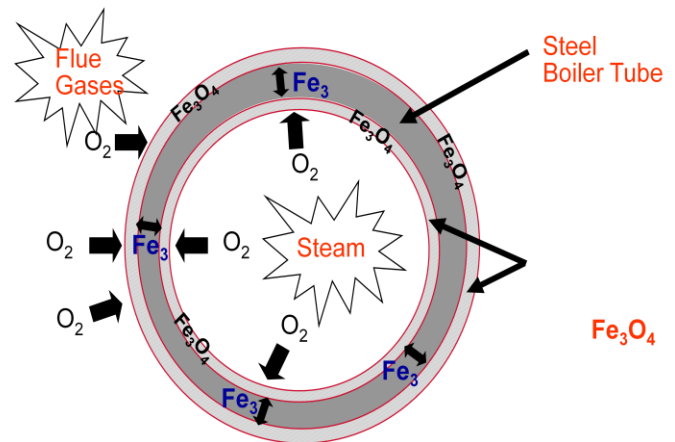


Fire Side:

Flue gases react with the Iron in steel to form Magnetite and Sulfides (External Scale)

Oxygen diffuses into the steel and Iron diffuses out of the steel to and combines to form magnetite

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