



Improving the System Life of Basic Oxygen and Electric Arc Furnace Hoods, Roofs and Side Vents

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January 23, 2008

Al-Bronze Equipment





Performance History – Carbon Steel

⇒ Skirt

⇒ ~ 20 Month Life

⇒ ~ 80 Shutdowns for Repairs

⇒ Flux Chute

⇒ ~ 12 Month Life

⇒ ~ 20 Additional Repairs

Ameribronze Performance History

⇒ Skirt

⇒ Installed Oct. 2004 (~ 39 mo)

⇒ Removed (System Repair) – 10/06

⇒ Back in Service – 01/07

⇒ ~ 7000 Heats (1/1/08)

⇒ Planned and Unplanned Maintenance

THREE TIMES (1 Planned)



Ameribronze Performance History

⇒ Flux Chute

⇒ Installed May 2006 (19 mo)

⇒ ~ 5500 Heats (1/1/08)

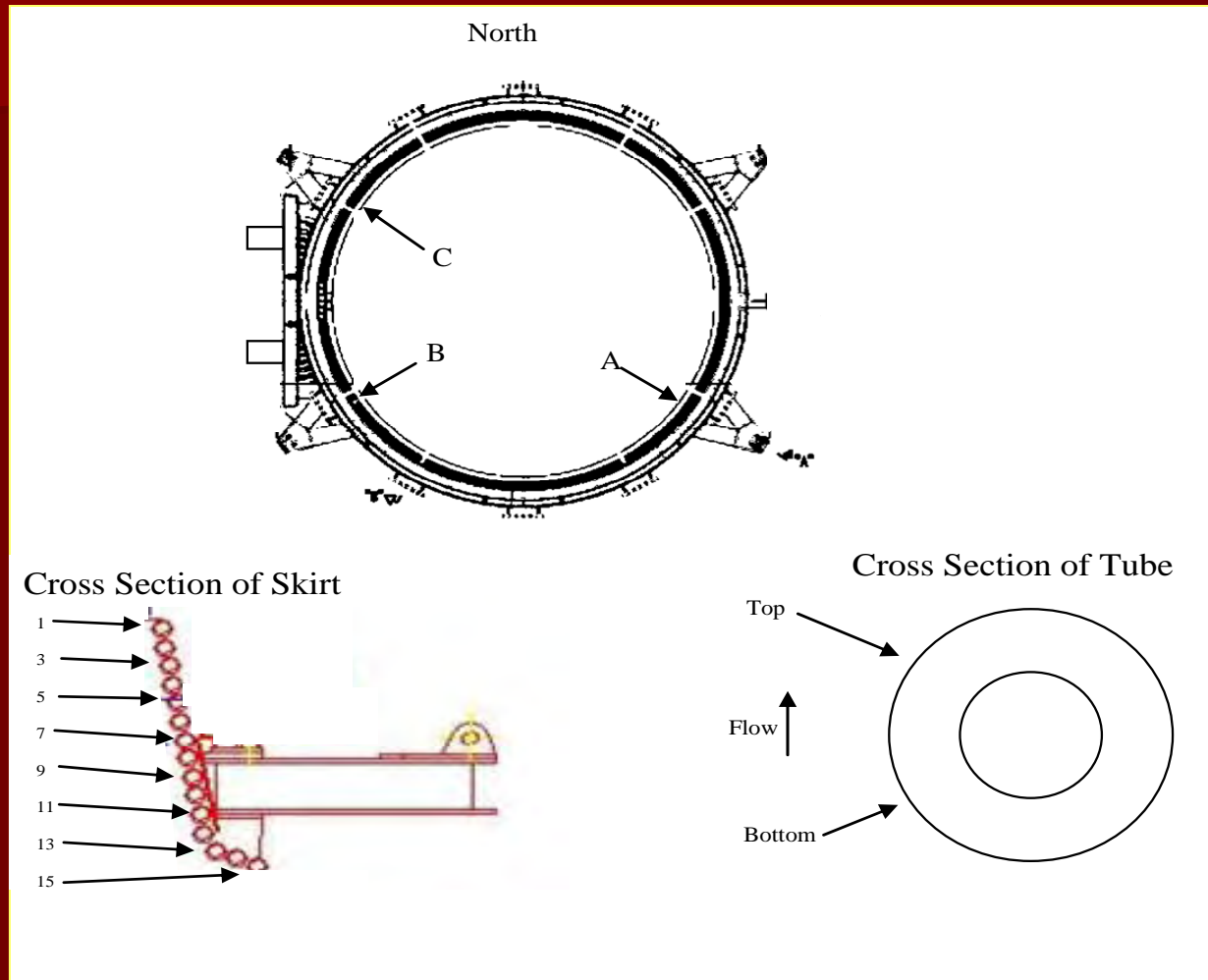
⇒ Planned and Unplanned
Maintenance

NONE



Thickness Measurements

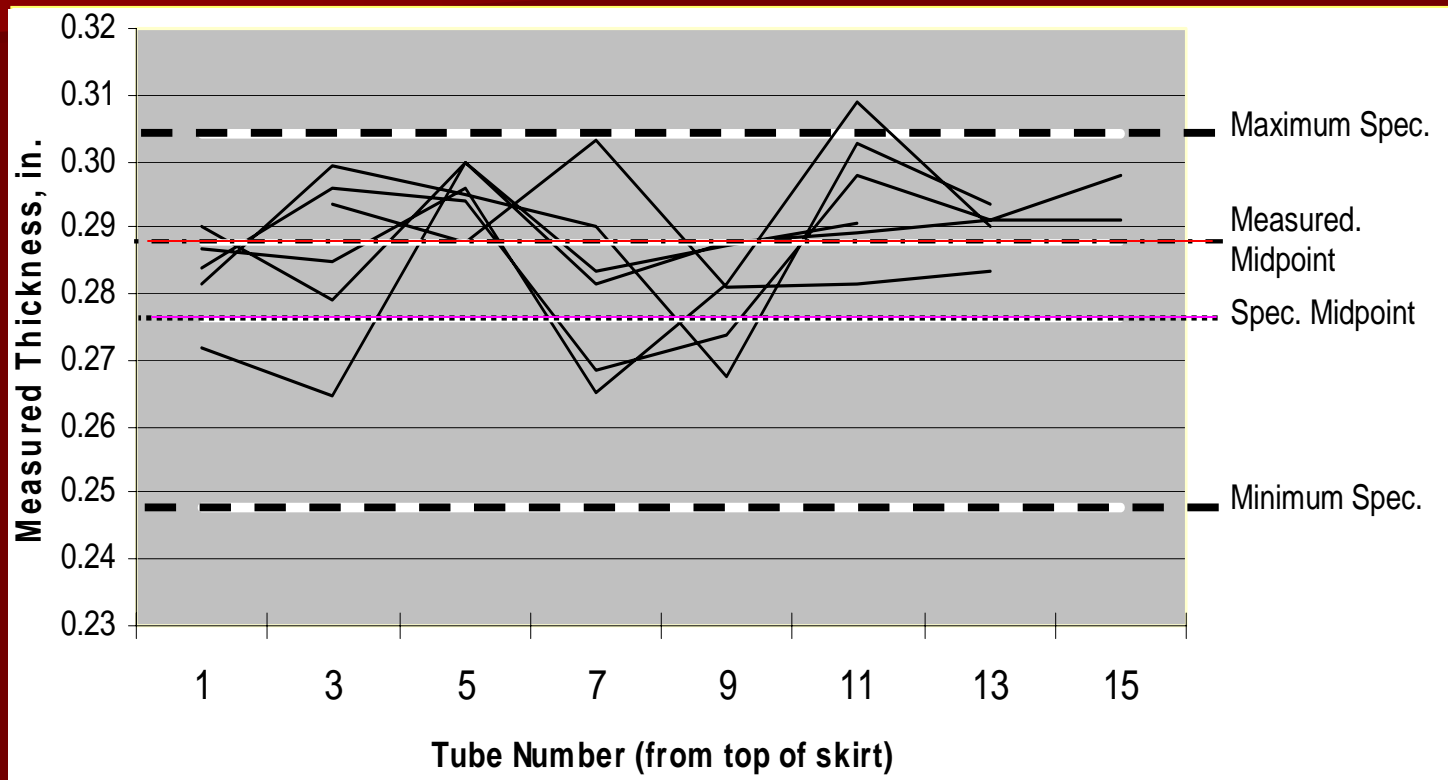
During 10/06 System Repairs (4563 Heats)





Thickness Measurements

During 10/06 System Repairs (4563 Heats)



Unintended Benefit

- ⇒ Non-adherent Slag
 - ⇒ Slag splashed onto the skirt falls off as skirt is moved into position for next heat
 - ⇒ No slag build-up
 - ⇒ No Deslagging necessary
 - ⇒ No Attendant operating problems
 - ⇒ Unbalanced Skirt Hydraulics
 - ⇒ Improper Skirt Location during Heat
 - ⇒ Mechanical Damage during Deslagging

Current Situation

- ⇒ REP has: (as of Sept. 2007)
 - ⇒ 2 Al Bronze Skirts
 - ⇒ 2 Al Bronze Flux Chutes
 - ⇒ Plan to purchase Al Bronze Lower Hood Section for next "N" Vessel replacement