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Global Innovation for
your High Temp World

SUGGESTED 45° SHELL CONE
(SUPPLIED BY CUSTOMER)

LEGEND
 DURACHROME 60C

MK LLRB-MT-A / 3 PCS. REQ'D
VOLUME = 103.5 Cu.In.

MK LLRB-MT-B / 68 PCS. REQ'D
VOLUME = 91.66 Cu.In.

Hot Metal Ladle Lip Ring Brick										
Drawn By:	Smenda	Checked By:	-	Approved By:	-	Study No.:	FRQ-16-4758	Date:	10/21/10	
1 10/20/10 REDESIGNED FOR INSIDE OF LADLE JMS - -		REVISION								
Ref. No.:	FC-00486									
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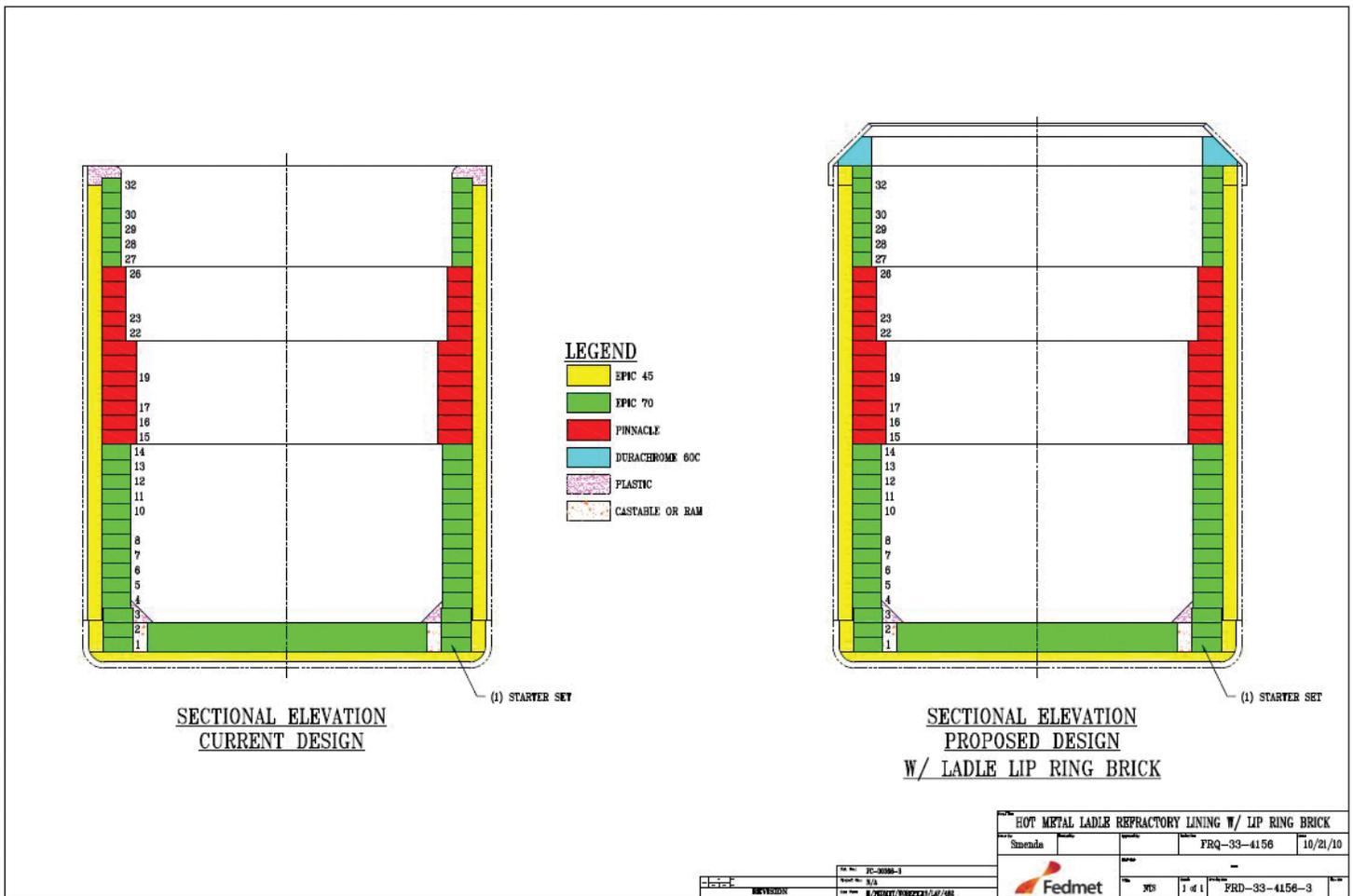
Ladle Lip Arch Brick

Lip arch brick offer a very unique and very strong way of ladle lining retention. Steelwork lasts longer as no metal goes over it directly. No forms, no curing time, no winterizing in cold months and no anchors. We can design a brick for any ladle so that 1 brick turns most ladles. You would need straight brick to turn the flat sided ladles. Lip arch systems are currently in use at McConway Torley and CMC Columbia.

Refractories work best when kept in compression. This is particularly true of ladle linings. Cracks, spalls, steel penetration and cobble-stoning are largely a function of lack of compression. There have been numerous different solutions developed and marketed for this problematic area. Many of these solutions are expensive, complicated, and maintenance-intensive. Some have obvious weak points. Bolts in particular are a problem.

Ladle Lip Arch Brick Cont.

They stretch, and when they do they are compromised. Anchors are better than bolts, if used in adequate number with proper spacing and if they are replaced when worn out. Welding is expensive and time consuming while offering only a slightly improved design. The ultimate solution uses the expansion of the brick to keep the lining tight. The inverted cone creates a constriction at the top of the ladle, and if properly designed to contain the forces generated, can lock a lining positively in the ladle shell. Lip arch brick offer a very unique and very strong way of ladle lining retention. The steelwork to do this is an expense, but requires little or no routine maintenance and has a short return on investment versus other consumable designs. The trick is in protecting the steelwork from molten metal and slag during decanting. The refractory in this inverted cone can be brick or monolithic. With brick, there are no forms, no curing time, no winterizing in cold months and no anchors. We can design a brick for any ladle so that one brick turns most round ladles. You would then need only a couple straight brick to close up the ring, or to do the flat sides of oval and obround ladles.



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