Refractory Lining Cost Log

How-to guide: what the workbook does, how to use it and what every number means. mfgcalcs.com

Refractory Lining Cost Log

Log every reline and repair on furnaces, converters and ladles and see refractory cost per tonne of metal, kg per tonne and downtime cost by lining campaign.

For: Melt shop and foundry managers, refractory and maintenance engineers, and cost accountants who track lining costs.

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Quick start

1. On Setup, type your company, currency and crew rate, then your vessels (with lost contribution per hour) and refractory materials (price per tonne, usable share).
2. On Lining Jobs, add one row per reline or repair: vessel, campaign, material and tonnes installed, setup and dry-out, crew hours and downtime.
3. On Campaigns, add one row per lining: when it went in and came out, and the heats and tonnes of metal it processed.
4. Read the Check columns, then open the Dashboard for cost per tonne, kg per tonne and lining life.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Your company, currency and crew rate, and the vessels and refractory materials the log uses.
Lining Jobs	One row per reline, repair or patch: material, setup, crew, downtime and what it cost.
Campaigns	One row per lining: when it went in and came out, the metal it processed, and its cost per tonne.
Dashboard	What linings cost per tonne of metal, how much refractory they use, and what relines and repairs cost in downtime.
Method	How every number is calculated, with assumptions, limits and sources.
Verify	Self-check: the workbook's formulas recomputed on fixed inputs against an independent reference.
About MFG Calcs	Everything MFG Calcs offers, free: calculators, templates, tariff tools, data and the Calkee AI helper.

What each number means

Quantity	How it is calculated	Units

Quantity	How it is calculated	Units
Bought and material cost	Installed tonnes / the material's usable share on Setup; x price per tonne.	t, currency
Lining cost	Material cost + setup and dry-out.	currency
Labour cost	Crew hours x crew rate (the row's, or the Setup rate) + mobilization.	currency
Downtime cost	Downtime hours x the vessel's lost contribution per hour x the share of the downtime that cost output.	currency
Refractory and all-in cost	Lining cost + labour cost; all-in adds the downtime cost.	currency
Campaign totals	Sums of the jobs whose Campaign matches: refractory cost, downtime cost, refractory used.	currency, t
Cost per tonne, kg per tonne, cost per heat	Once a campaign has an end date: refractory (or all-in) cost / tonnes of metal; refractory used x 1,000 / tonnes; refractory cost / heats.	cy/t, kg/t, currenc
Dashboard per-tonne figures and lining life	Completed campaigns of the vessel shown: summed cost / summed tonnes; summed heats / campaigns.	currency/t, heats

Assumptions, limitations, sources and the self-check (the Verify sheet, which recomputes the workbook's formulas on fixed test inputs) are in the workbook. The last page shows the Dashboard with the example data for Tarrowfield Castings, a fictional business.

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Engineering estimates for planning and improvement work. Verify the results against your own process, data and standards before you rely on them.

Refractory Lining Cost Log

What linings cost per tonne of metal, how much refractory they use, and what relines and repairs cost in downtime.

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Vessel: AOD vessel, 15 t

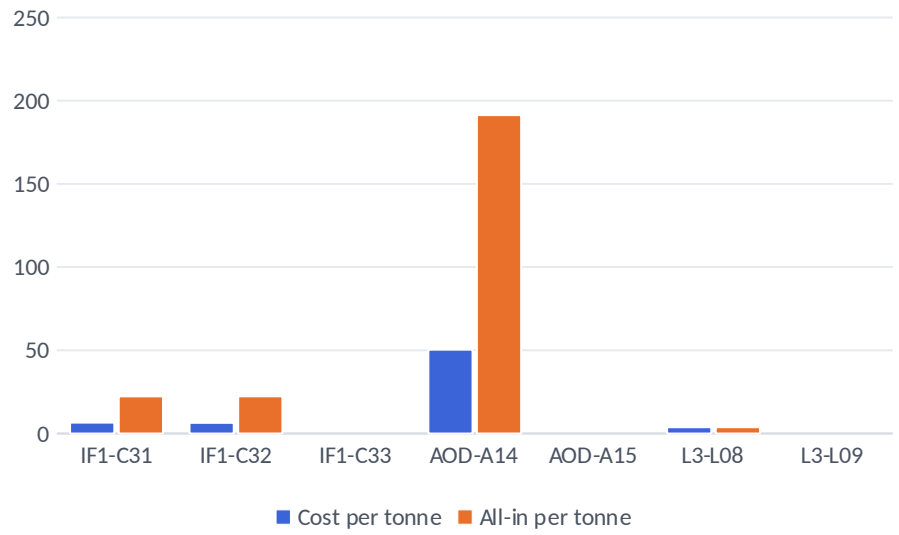
Jobs from:

Jobs to:

Showing AOD vessel, 15 t: 7 jobs. Cost per tonne, kg per tonne and lining life use completed campaigns. Money in USD.

REFRACTORY COST PER TONNE (USD)	REFRACTORY PER TONNE (KG)	AVERAGE LINING LIFE (HEATS)	ALL-IN COST PER TONNE (USD)
50.33	**18.21**	**132.0**	**191.33**
Completed campaigns: cost / tonnes of metal	Installed / tonnes of metal	Completed campaigns	With downtime that cost output

Refractory cost per tonne by campaign



Spend by vessel

