

Meeting Customer request:

Numerous ABS users have asked to add the ability for the system to compare what Least Cost Charge (MIX) called for versus what the operators physically used (Inventory Control).

This information can be quite useful to mine out the following data:

- The cost savings that can be made when following recommended charge make-up.
- Inconsistencies in raw materials analysis.
- Ability to meet tighter specifications.
- Uncover hidden variances in operations.
- Focus on why liquid chemistry checks differ from charge predictions.
- Enhance message to all employees that examining details leads to financial success.



ABS ENHANCEMENT Aluminum Industry Comparing actual usage versus theoretical

Deploying software that solves complex questions such as “what raw materials should I use in my charge to lower my cost of production” is a step in the right direction. However, once actual physical results are seen, added questions may arise.

- *Could I have added more of the cheapest raw scrap without going out of customer specifications?*
- *Is the chemistry I have for routine scraps correct?*
- *How close are predicted yields to actual yields?*

The new program will allow the user to further evaluate charges. User friendly, it begins by simply selecting the charge number. Once selected, the alloy, melter and charge date will automatically fill-in. Then select “Process the Charge”.

Charge Num.	Alloy Code	Melter Id	Date M...
DemoAlum	6063	1	2022030
USAGE	6063C	1	202203...

After the process is complete, the user can view the information in Excel by first selecting the tab “Operation”, then “Open XLS File”. The detailed comparison will then open.

Charge Number	USAGE						
Alloy Code	6063C						
Melt Date	20220301						
Name	Lot Number	Ordered Lbs	Ordered Cost	Actual Lbs	Actual Cost	Variance Wgt	Variance Cost
5005	A23	11,700	\$12,636	12,000	\$12,960	-300	-\$324
6061	N6	307	\$227	290	\$215	17	\$13
6061 GEN	M9	6,000	\$4,440	5,500	\$4,070	500	\$370
6061/5052	B9	200	\$116	200	\$116	0	\$0
6063	A2	34,713	\$31,936	35,000	\$32,200	-287	-\$264
6063 NAT	A1	28,800	\$26,208	30,000	\$27,300	-1,200	-\$1,092
ALUM CANS	D4	2,000	\$820	1,500	\$615	500	\$205
CHIPS	C66	33,827	\$14,884	30,500	\$13,420	3,327	\$1,464
FOIL	D3	8,000	\$4,400	8,200	\$4,510	-200	-\$110
Mix Revert	XX9	281	\$149	250	\$133	31	\$16
Totals		125,828	\$95,816	123,440	\$95,538	2,388	\$278
	SI	FE	CU	MN	MG	CR	Ti
Charge Aim	0.2 / 0.6	0 / 0.35	0 / 0.1	0 / 0.1	0.45 / 0.9	0 / 0.1	0 / 0.1
Actual Final	0.55000	0.28000	0.07500	0.08800	0.65000	0.06000	0.07700
Actual Theo	0.53800	0.25000	0.05800	0.07900	0.63000	0.05500	0.06400
Actual P1	0.53800	0.24500	0.07000	0.08100	0.77000	0.06100	0.07200
Actual P2	0.54000	0.24700	0.07200	0.08200	0.72000	0.05900	0.06890

Savings Sometimes Hidden

Can more of the lower price raw materials have been added and still stay in specification? Can I further reduce any alloy additions?

Why did the preliminary tests differ from what was predicted in the theoretical calculation?

Some residuals finished higher than what was mathematically expected. Is my analysis for certain raw material correct? Are certain scraps changing? How much savings can be made?



If you would like to further explore these questions, especially in this time of high prime and alloy costs, email ABS at:

ABS@tmsinternational.com or call 219-864-0044.