PolyCon Ramp-Up Weekly Progress Report

September 21st, 2023

Chutes

Chutes

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Status	Comments
Chutes 30 RHS, and 32 LHS release reports	15/09/23	Complete	Reports to be translated and shared with site.
QA/QC checks on chutes 34 and 37	19/09/23	Complete	Report to be translated and shared with site.
Chute 30 (RHS) Liner replacement	15/09/23	Complete	Damaged Tivar 88 liner was replaced.
New Chute 37 (RHS) modification works	15/09/23	Complete	Manufacturing completed and installation is in progress.
Chute daily checklist	19/09/23	Complete	Checklist to undergo translation and will be shared with site for comments.
Chute 30 (LHS and RHS) monitoring	22/09/23	Ongoing	Monitor chute performance for any ore build-up.
New Chute 37 (RHS) installation	22/09/23	Ongoing	Installation earmarked to be complete by 22/09.

Chutes

Work updates

Completed | Overdue/Delayed | Scheduled

Modified Chute 37

Chutes

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
Chute 34 (RHS) Installation	28/09/23	Chute to be installed during the planned shutdown for the RHS reinstatement works	Delay in commissioning if middle section divider is not installed before installation.
Chute 17 & 19 material delivery to site	29/09/23	Get confirmation of when material has been delivered to site and start monitoring manufacturing works.	Delays by the vendor(s) of materials required for chute fabrication.
Chute 20, 21 & 22 client review	29/09/23	Technical review session with Kazzinc to incorporate their comments and finalize the concepts.	Key stakeholders' unavailability due to ongoing RHS reinstatement works.
Align with site on the installation schedule for the remaining chutes	29/08/23	Discuss proposed installation schedule with site.	No known risks.
Chute 35 Updated DEM Simulation	29/08/23	Previous DEM simulation showed higher wear rate on one side of the chute. A rock box has since been added and an updated DEM simulation required.	No known risks.
Chutes No.17(1.2), No.19(1.2), No 33 (1.2) submitted to Nurdox for fabrication and installation	01/10/23	Nurdox to develop detailed engineering drawings for the respective chutes.	Delays by Nurdox in completing the detailed engineering drawings. Delays by the vendor(s) of materials required for chute fabrication.

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Crushing

Crushing

Work updates

Completed | Overdue/Delayed | Scheduled

	Task name	Due date	Status	Comments
✓	Mill sampling campaign	15/09/23	Complete	Sampling of the primary and secondary milling circuits. Sampling results will be used to develop a model for optimizing the circuits for higher throughputs.
✓	Testing of KSD washing efficiency with water pumps operated in parallel.	15/09/23	Complete	Increased water in the KSD caused overflow in the DMS (Spiral classifiers) and could not reach the targeted water provisioning. Meeting to be scheduled to discuss strategy for increasing washing capacity in the KSD.
✓	Water flow meters procurement for KSD crushing circuit.	19/09/23	Complete	Process initiated on model types.
	KSD crusher monitoring of change in performance with new oil filter installed.	19/09/23	Ongoing	Performance has improved, circuit no longer stopping frequently due to high temperatures.

Crushing

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
CTA and KSD liners arrival on site.	25/09/23	Modified liner design for industrial testing.	Customs clearance delays. Delays by vendor.
Continued monitoring of PSD and feed blend through KSD	26/09/23	Consistent feed blend and PSD is critical for good operability of the DMS circuit	No known risks.
Milling sampling PSD analysis results	29/09/23	Receive mill sampling results from the laboratory	Delays by the laboratory in providing the PSD analysis results.
Align with site (Chief Mechanic) to procure foam seals for all cone crushers.	31/09/23	Procure and install foam seals to cover cavities around the crusher assembly to reduce dust release. Concrete works needed under the crusher to help seal holes..	No known risks.

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Screens

Screens

Work updates

Completed | Overdue/Delayed | Scheduled

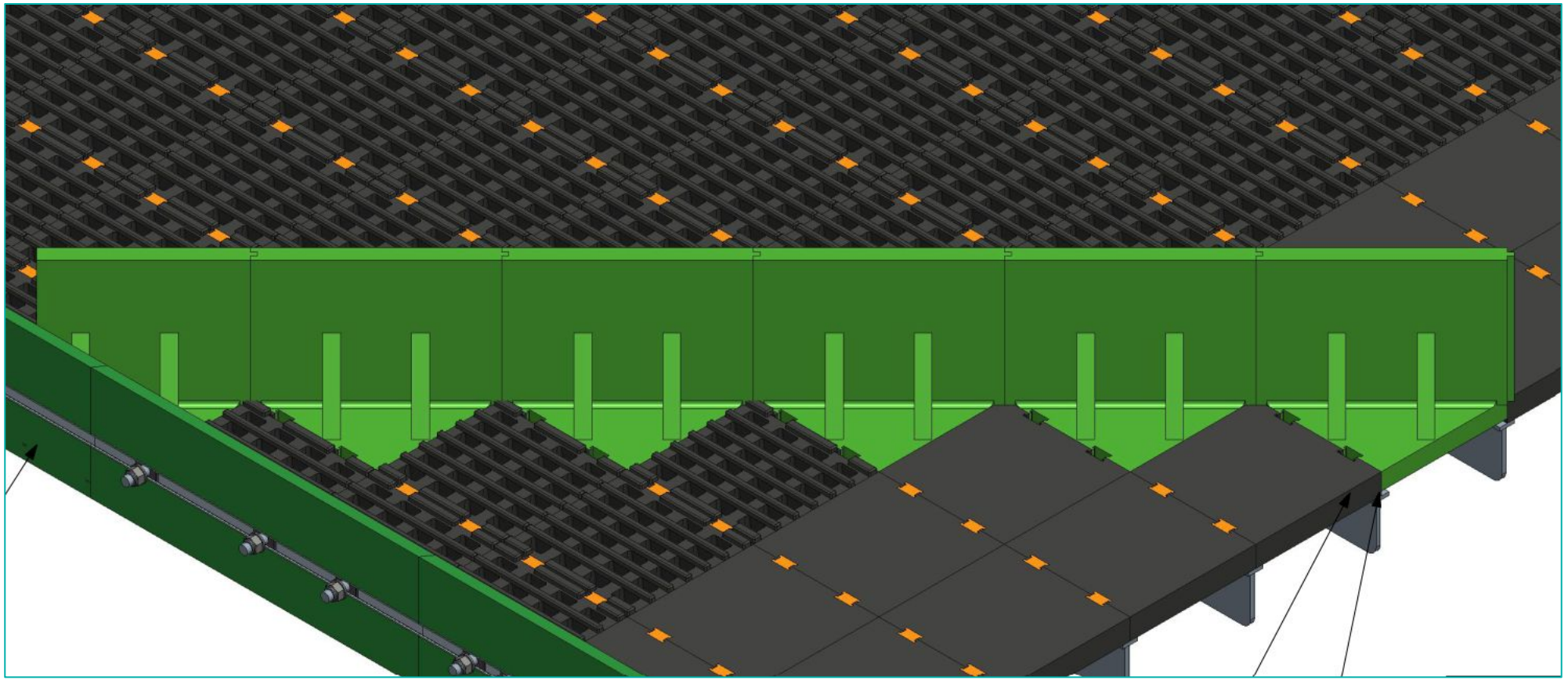
	Task name	Due date	Status	Comments
✓	Feed prep screens diverter panels design	19/09/23	Complete	Design approved. Awaiting manufacturing timelines from Multotec before order placement.
	FLS Screens Audit	22/09/23	Ongoing	FLS specialists are conducting a thorough assessment of all screens as well as provide training to Kazzinc mechanics on inspections and exciter weight setting.

Screens

Work updates

Completed | Overdue/Delayed | Scheduled

Feed prep diverter panels



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Screens

Work updates

Completed | Overdue/Delayed | Scheduled

	Task name	Explanation	Action required	Due date	Revised due date	Responsible
✗	Cross-beams procurement	FLS awaiting assessment results from their specialists currently on site to issue a comprehensive quotation.	Follow-up with FLS following report release by screening specialists	19/09/23	29/09/23	Hatch
✗	DMS RHS screens inspection	Delay in cleaning screens due to inaccessibility caused by the bypass conveyor	Expedite cleaning as soon as the bypass conveyor has been removed and conduct the inspection	21/09/23	29/09/23	Kazzinc

Screens

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
FLS Screens Audit Report	29/09/23	Comprehensive report from FLS providing assessment results	Delays by FLS in completing the report

GLENCORE

DMS

DMS

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Status	Comments
RHS Magnetic separators deep cleaning	16/09/23	Complete	Completed.
Intermediate conveyor works – assembly of conveyor support structure	19/09/23	Complete	Conveyor structure installed.
Intermediate conveyor project – assembly of service platform and rails	22/09/23	Complete	
Installation and splicing of new conveyor belt	19/09/23	Complete	Belt in position and aligned.
Intermediate conveyor project - Fabrication of the transfer unit on the loading side	21/09/23	Complete	
Intermediate conveyor project - Manufacturing of the transfer unit on the discharge side	21/09/23	Complete	
Installation and integration of instrumentation		Complete	Required complete shutdown for DeltaV integration.
Replacement of missing DM circuit piping	19/09/23	Complete	
Pump 66 and pump 67 switchgear upgrade		Complete	Required complete shutdown.
Relining of DM tank		In progress	Only 4 m^3 area requiring lining.
Removal of the RHS conveyor 27		In progress	May be completed by the time presentation is shown to Denis
WEMCO drain frame modification		Complete	To be installed once conveyor 27 is removed

DMS

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Status	Comments
MagSep gearbox replacement	22/09/23	Complete	Shaft had to be machined
Installation of pH meters on CM circuit	20/09/23	Complete	Done to see when to add lime to prevent oxidation of FeSi
Installation of new chute 37	21/09/23	In Progress	The chute should be monitored for wear routinely once installed
Installation and commissioning of middle conveyor	22/09/23	In Progress	Performance of Chute 37 must be monitored particularly the feed onto the conveyor – Due the 50:50 split in the chute, a diverter to the conveyor should be used to divert the material to the WEMCO drum as the normal mode of operation and the conveyor as a back-up.

DMS

Work updates

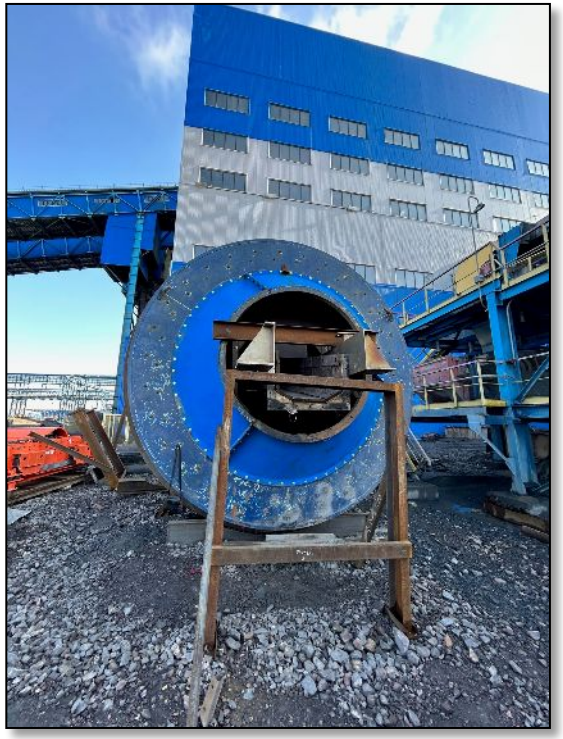
Completed | Overdue/Delayed | Scheduled

Middle conveyor support structure assembly

RHS – MagSep cleaning

RHS – Pump 56, 66 & 67 C1 checks

RHS – WEMCO drum mock up assembly completed



Work updates

Completed | Overdue/Delayed | Scheduled

RHS Commissioning Schedule

- Successes
  - RHS MagSeps were cleaned and piping re-installed.
  - WEMCO Drum frame modification completed.
  - Modifications to chute 37 for middle completed, manufactured and installed.
  - Middle bypass conveyor structure is completed and nearly ready for commissioning.

- Main risks:
  - Quantity of resources available for RHS re-instatement activities is limited due to the middle conveyor installation:
    - More resources available from the 19th September 2023 once the conveyor works are scheduled to complete.
  - To sustain the monthly production targets, some works initially scheduled for September have been postponed to October:
    - Feed prep screen Multotec conversion
      - H-pins
      - Weir bars for slowing material and improving screening to remove +0-5 mm
      - New spray bar installation on bottom deck
    - Feed prep screen underpan chute replacement (chute #32).
    - Double spiral classifier refurbishment work.
    - U-channel installation.

DMS - RHS

Work updates

Completed | Overdue/Delayed | Scheduled

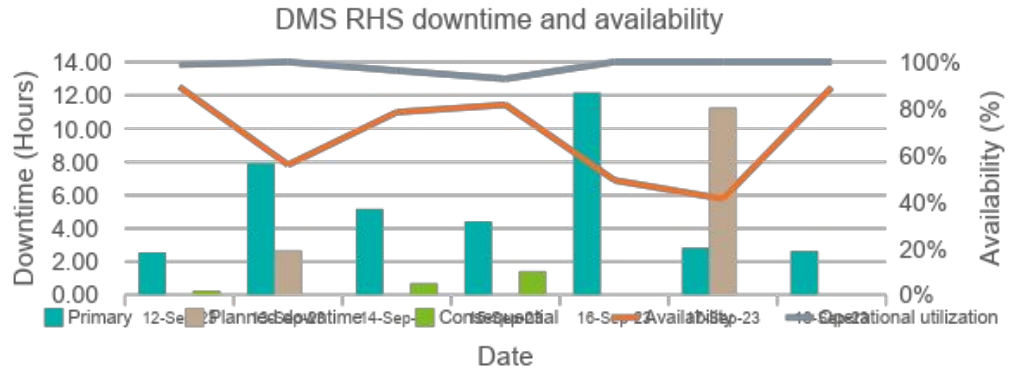
Task name	Due date	Comments	Risks
Cleaning of the RHS drain and wash screens	22/09/23	Debris on screen and in underpan must be cleaned	No known risks.
Installation of new screen panels on drain and wash screen	23/09/23	0.8 mm panels will be place on rinse screen and 2.8 mm panels on drain screen – will later both be converted to 0.8 when panels arrive	No known risks.
Installation of a new spray bar for RHS wash screen	24/09/23	To be optimised to wash on first third of the screen to allow for draining	No known risks.
Installation of the RHS WEMCO drum with frame	24/09/23	All pieces are ready in laydown area for installation	May be limited with crane availability.
Installation of CM circuit piping	24/09/23	Only WEMCO drum piping remaining	No known risks.
C1 and C2 commissioning RHS	25/09/23	C1 and C2 across multiple equipment – screens, drum, magseps	C1 and C2 check across multiple equipment – plan is that checks will begin as soon as installations across the plant are complete to pick up any faults sooner.
C3.1 Commissioning with water	27/09/23	Running water through the circuit and checking for any leaks	No known risks – more will be raised and managed after the C1 and C2 checks.
C4.1 Commissioning with water and ore	27/09/23	Running water and ore through the circuit and checking screen performance	No known risks – more will be raised and managed after the C3 checks.
C4.2 Commissioning with medium and ore	01/09/23	Running medium and ore through the circuit and checking overall separation performance	No known risks – more will be raised and managed after the C4.1 checks.

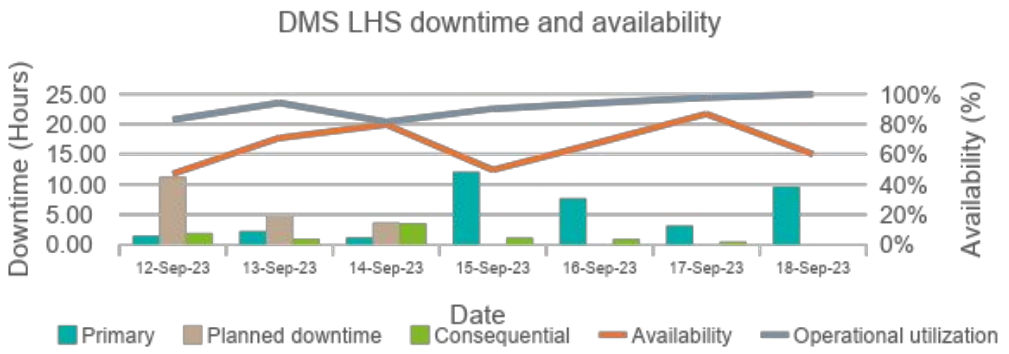
DMS Downtime

Work updates

Weekly Downtime Analysis

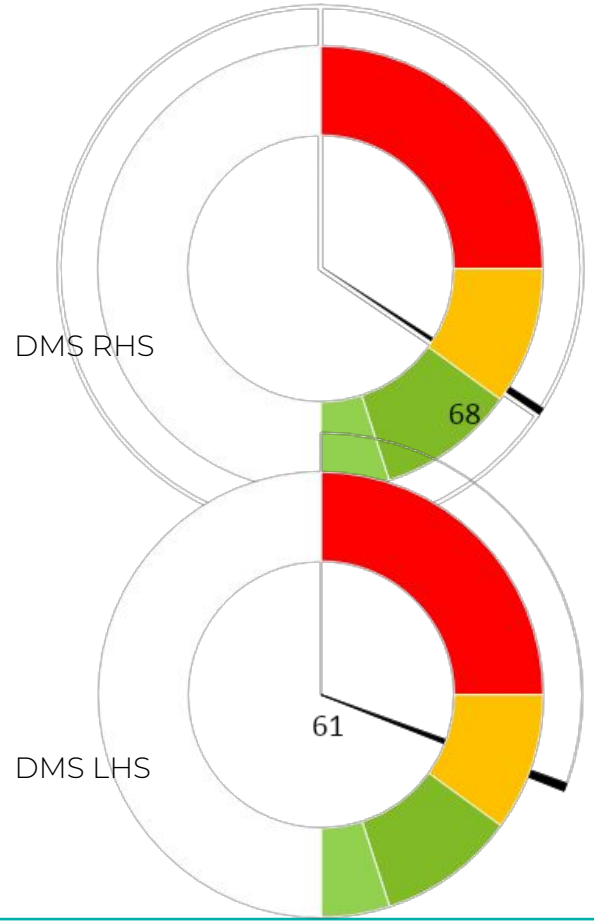
Weekly downtime and availability: Week 37 (12 – 18 September)





Average total utilisation: Week 37 (12 – 18 September)

- The DMS RHS saw an increase in total utilisation from 46% to 68% due to the planned maintenance activities that took place during the previous week.
- The LHS saw a decrease in the same metric from 22% to 61% also due to the maintenance works taking place in the plant during the previous week.



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DMS LHS Downtime

This week saw a decrease in the DMS LHS downtime, primarily due to last week's planned maintenance that led to long durations of downtime in the DMS LHS.

DMS LHS Downtime: Week 37 (12 – 18 September)

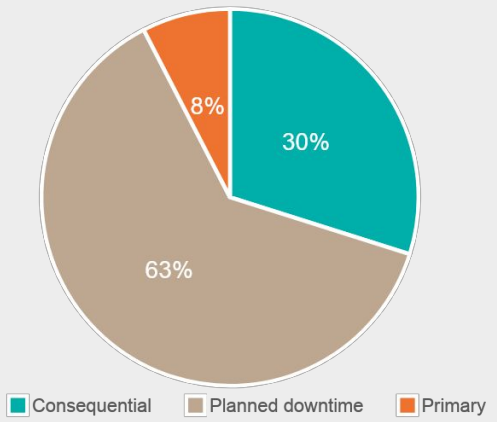
Last Week

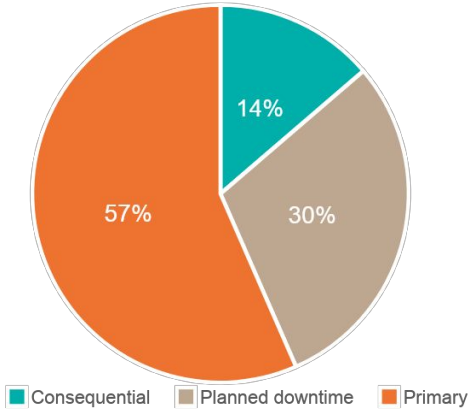
Week 36 Downtime

78%

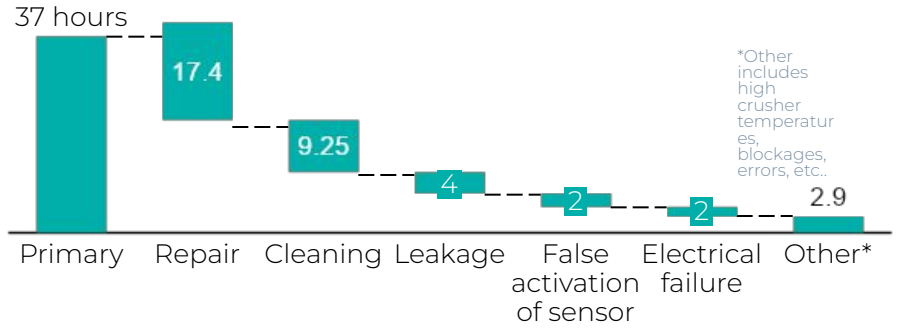
LHS Week 35 Downtime

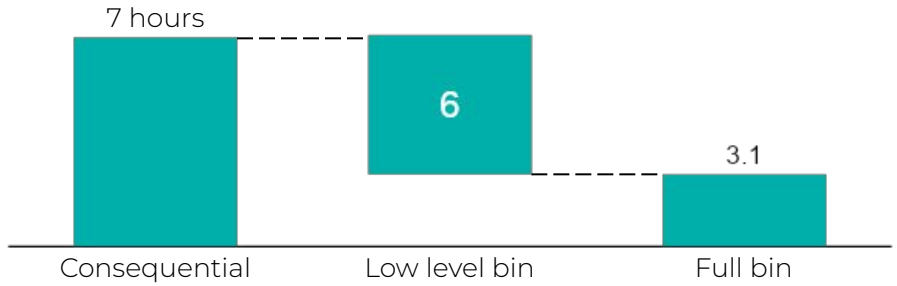
39% ▼39%





DMS LHS Downtime Details: Week 37 (12 – 18 September)





There was 20 hours of planned downtime for installations on screen #11 and the discharge chute, as well as inspections of the chutes and distribution box.

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Flotation

Flotation

Work updates

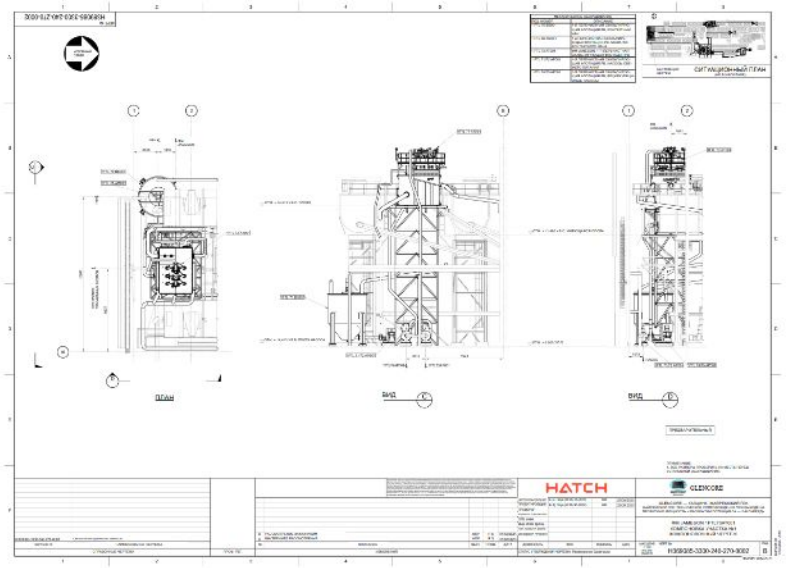
Completed | Overdue/Delayed | Scheduled

Task name	Due date	Status	Comments
Kick-off meeting with Kazzinc, Hatch & KAZPROM AVTOMATIKA for procurement of PLCs for Jameson cells as long-lead item	15/09/23	Completed	Hatch to issue all specifications documents to KPA, who will review and request further information as needed.
Restart of 3x Zn Ultrafine grinding mills	19/09/23	Completed	3x regrind mills operating from late 16/09.
Issue Jameson Cell general arrangement / layout drawings	22/09/23	Completed	All GA's shared with Kazzinc for review and have received approval.
Issue Jameson Cells CAPEX Estimate for internal review	22/09/23	Completed	Client review to follow completion of internal review.
Issue of Jameson Cells HAZID & Constructability Report for internal review	22/09/23	Completed	Client review to follow completion of internal review.
Handover of Jameson Cells FEL2 current deliverables to Karaganda Design Institute.	22/09/23	Completed	All deliverables at their status (Client Review or Approved for Use) have been shared. Reviewing and responding to first queries.
Jameson cell detail design schedule development	22/09/23	Completed	Stretch schedule based on current best available procurement times, and compressed schedule with procurement delays reduced based on assumptions have been developed for review.
Issue of various deliverables for Zn Rougher-Scavenger Extension (4 Outotec cells) FEL2 for client review	22/09/23	Completed	• PFD & Stream table. • Mechanical design criterion – Released for CR on 14 Sep 23. • Process Design Criterion – Released for Internal review on 18 Sep 23. • Civil/Structural - Released for CR on 17 Sep 23. • Electrical Design Criteria - Released for CR on 14 Sep 23.
4th Filter Press Operational Readiness support	28/09/23	Ongoing	Tie-ins and additional piping in progress. Hatch have engaged with Kazzinc to guide them in implementing C1/C2 check-sheets ahead of slurry commissioning.
Review of air piping design for 50m^3 Zn cells and calculation of blower system capacity	06/10/23	Ongoing	Required documentation has been obtained with support from Kazzinc. Calculations and checks now underway with Owners Engineer team.

Flotation

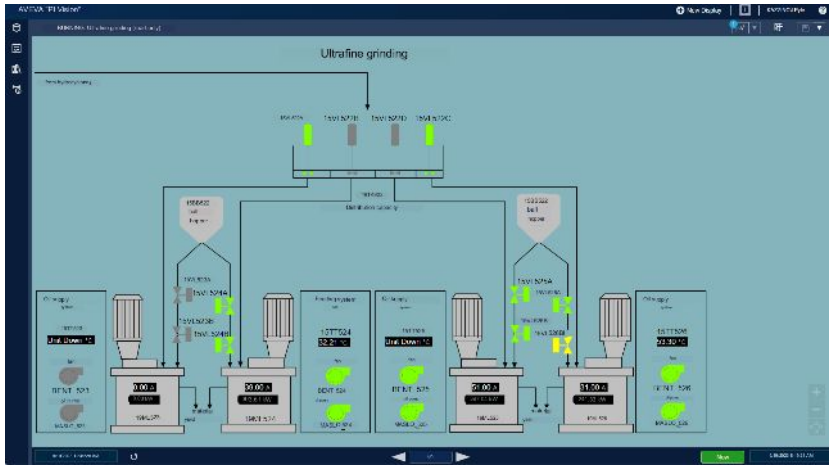
Work updates

Completed | Overdue/Delayed | Scheduled



Issue of Jameson Cell layout / general arrangement diagrams for client review

B4500/12 & Z1200/1 cell rubber lining & trial assembly in workshop complete. Packaging for transport underway.



3x regrind mills operating, from late 17/9 onwards. Power draw ranging from 200 to 400 kW

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Flotation

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Explanation	Action required	Due date	Revised due date	Responsible
Client review of documents	Documents awaiting final review/ close-out	21/09/23 Update – Performance issues in flotation circuit required full focus of Kazzinc during previous week. Documents have been printed and delivered to relevant site team members to expedite review this week.	Various – summary below	22/09/23	Kazzinc
Commissioning - 6 x 38 m^3 Turkish Zn-Py cells & Zn Hydrocyclones	8/09 - Overflow issues from feed & discharge boxes prevented with addition of froth sprays 21/09 - Currently reviewing cell operating parameters (froth depth, air, etc) and recommending optimal values to operations team .	Support site operations team with investigations, review of design calculations where required. Propose additional solutions when issues identified.	31/08/23	28/09/23	Kazzinc

Title/Наименование		Document Number/№ документа	Date (Sent for review)/Дата (направлено на рассмотрение)
Functional Description	Функциональное описание технологического процесса	H369085-3300-210-208-0003	11-Aug-23
PLC Input-Output List.	Перечень вводов/выводов ПЛК	H369085-3300-270-216-0001	17-Aug-23
Control and Automation Material Take-Off (MTO)	Автоматизация — Ведомость заказа материалов	H369085-3300-270-222-001	22-Aug-23

Flotation

Work updates

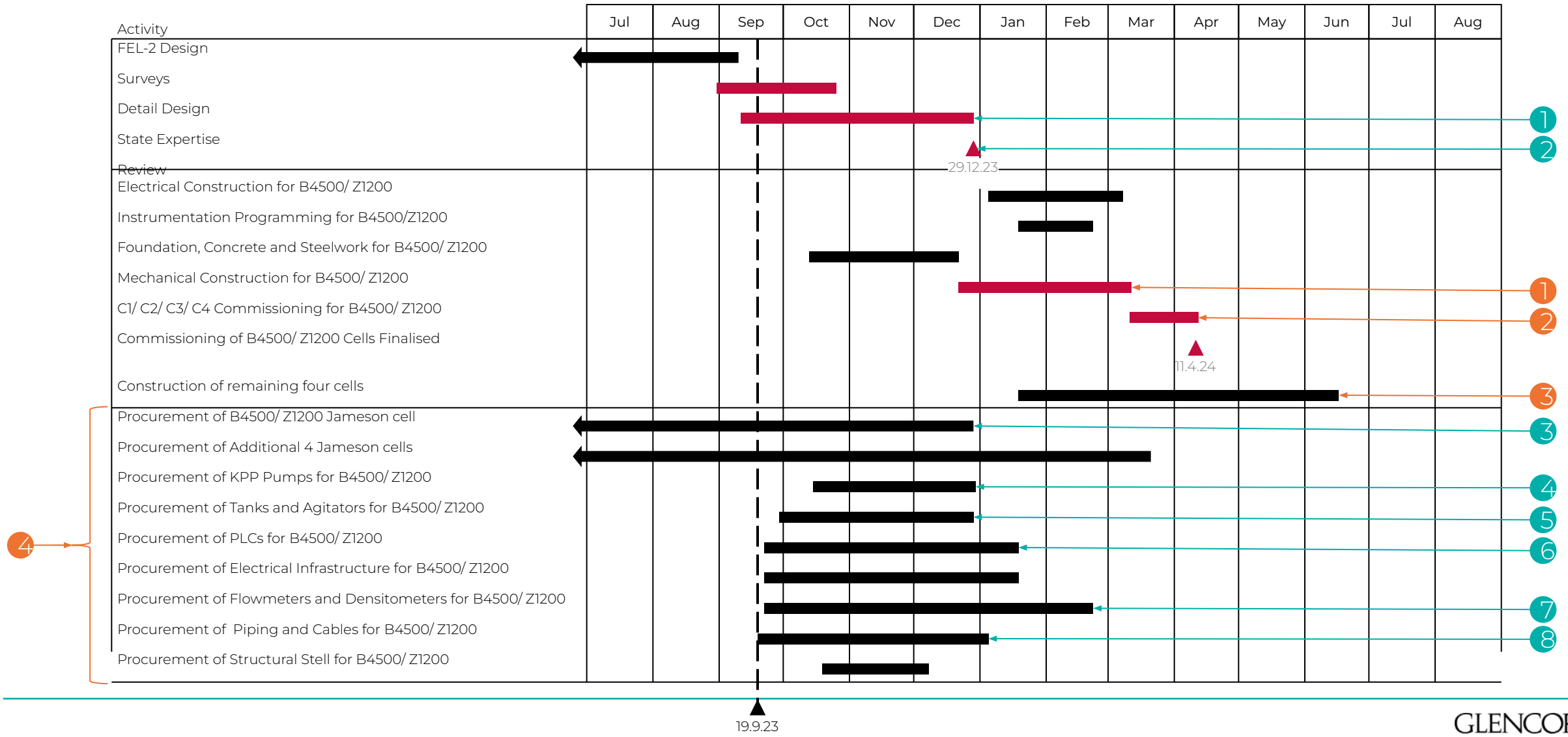
Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
FEL2 Engineering – Jameson & Zn 38m^3 Cells			
Jameson Cells FEL2 Project Close-Out Report	29/09/23	Final report to summarise FEL2 engineering process and design outcomes.	Availability of all disciplines to complete relevant report sections.
Flotation Circuit Initiatives			
Finalisation of filter press construction	29/09/23	The 4th filter press will be commissioned at the end of this month.	Contractor delayed to finalise construction,
10x 50m^3 Zn Scavenger cell construction	31/12/23	Delays in fabrication of foundations due to zero level flooding.	Delayed construction.
General Tasks			
Zn Ultrafine Regrind Mill restart trial	15/09/23	Regrind restart will liberate gangue composites, allowing increased recovery at target concentrate grade.	21/09 - Trial ongoing. Process plant stability could impact performance. Hatch to monitor power draw, as well as monitor sampling of of regrind P80 tracking.
Development of operating philosophy & visual monitoring guides for grinding & flotation	06/10/23	Operating philosophies will be progressively reviewed & shared with site operations personnel to be implemented as a team.	Delays with establishment of key performance targets
Slimes & Product Thickener Improved Control Philosophy Implementation	6/10/23	21/09 - Development of clear 1-page operating guidance by SME in Progress Implementation & On-Site Supervision – to follow start of Oct	Availability of team members to develop procedure.
Operational Readiness for flotation	Ongoing, 31/12/23	Development of equipment checklists & commissioning plans to ensure safe and effective ramp up of flotation initiatives	Availability of proposed initiatives design & operational documentation.

Jameson Cell Schedule- Stretch

Work updates

Completed | Overdue/Delayed | Scheduled



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Jameson Cell Schedule- Stretch

Work updates		
Completed	Overdue/Delayed	Scheduled

Clarifying Notes

1. Waiting period for tanks and PLCs due to the need for detail specifications form institute
2. Time for commissioning accounts for final-tie ins and leaves room for repairs
3. Construction schedule for remaining cell to be refined dependent on resources for construction, procurement and commissioning times etc.
4. For sake of brevity not showing the procurement of items for remaining four cells. Assumption is that this will arrive in-time for subsequent construction

Actions

1. To ensure that detail design prioritises deliverables which is needed to start construction (Foundation and Steelwork Package, Agitators and Tanks)
2. To circumnavigate state expertise review and environmental impact assessment if possible
3. Ensure B4500/ Z1200 cell arrive at Zhairem at the end of December
4. Procure KPP pumps as an interim solution to extended pump lead times
5. Expedite package for agitators and tanks detail design deliverable for swifter procurement. To start procurement before detail design is complete
6. Reduce procurement of PLCs from 130 working days to 60 working days
7. Reduce lead times of flowmeters and densitometers from 120 working days to 100 working days
8. Procure all construction materials (steel, piping etc.) within time for construction to commence

Risks

Resources for construction could potentially be overallocated for the construction timeline. Need to ensure parallel work is possible of construction
Procurement leadtimes are unlikely to materialise with what is needed to achieve schedule. Current timelines are highly optimistic
Key risk items to procurement are: PLCs, Tanks, Structural steel
Reliant on information in a conceptual stage of design
Uncertainty as to the need for state expertise review and environmental impact assessment. Potential to delay project significantly if needed

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MOS/AMM

MOS/AMM

Work updates

Completed | Overdue/Delayed | Scheduled

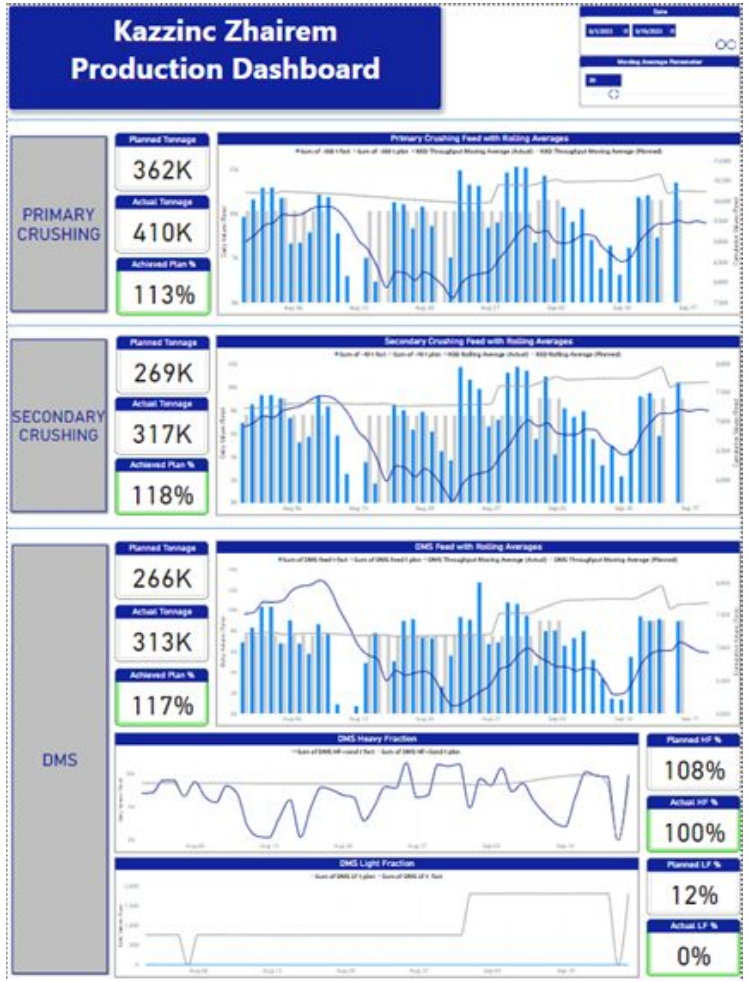
Task name	Due date	Status	Comments
DMS Maintenance Meeting between department leads.	15/09/23	Complete	This has been merged with the top complete initiative (twice daily DMS Maintenance meetings).
DMS Conveyor Operator Training (28/08/23 - 15/09/23).	15/09/23	Complete	Operator training on conveyor checklist complete. Examinations are also being conducted and certificates issued for competency.
Screen Maintenance strategies	20/09/23	Complete	Screen Maintenance strategy was developed with benchmark and expert judgment. Multotec only gave us the rail and panels installation guide.
Current State Assessment of Zhairem Production KPIs & Draft Production Dashboard	20/09/23	Complete	Performed an assessment of the current Production KPIs used at Zhairem. Identified additional KPIs to be included. This has been socialised with Kazzinc Management.
Implementation and Training of the PowerBI Defect Register & Dashboard (11/09/23 - 29/09/23)	29/09/23	Ongoing	This tool will be implemented in daily DMS meetings. This will aid with daily maintenance planning and also shutdown planning, ultimately improving spare parts and resourcing.
Training Operators on Screens Checklist for DMS (18/09/23 - 6/10/23)	6/10/23	Ongoing	Training will begin for Screen Operators conducting Screen Checklists. Approval from Senior Shift Master to conduct training.

MOS/AMM

Work updates

Completed | Overdue/Delayed | Scheduled

Production KPI Dashboard and Reporting being developed with draft shown below.



Improved Resourcing (including sub-contractors) and Planning through use of Defect Register being utilised in DMS Maintenance Meetings.

DETAILED DEFECT REGISTER

No.	Plant Area	Equipment Group	Equipment	Task Description	Priority (A/B/C)	Shut Required? (Y/N)	Date Identified	Status (Open/ Closed)	Other Comments
1	Thickening	Pumps	Pump k-100	Add tie-in isuction of pump K-100 to line B-13 for gland water	A	Y	18/07/2023	Closed	Verstroy
10	RHS	Conveyors	Conveyor 22	Repair and replace the lifter at the hopper of Conveyor 22	A	Y	18/07/2023	Closed	
103	LHS	Conveyors	Conveyor 12	Fix leakage of the gearbox of conveyor 12	A	Y	22/08/2023	Closed	
109	LHS	Conveyors	Conveyor 31	Repair guard of conveyor 31	A	Y	22/08/2023	Open	
115	DMS	Other	Overhead crane (5 ton)	Overhead crane (5 ton)-Fix up to standard: (hook, plates)	A	N	23/08/2023	Closed	WEEK 34- shutdowm
118	LHS	Pumps	Pump 52	Reinstate pump 52 screen guard (pulleys)	A	N	23/08/2023	Open	
12	LHS	Conveyors	Conveyor 10	Repair the discharge chute from Conveyor 10 to Screen 21 and restore the divider.	A	Y	18/07/2023	Closed	
136	LHS	Screens	LHS Rinse screen	Replace a broken Fishtail on Rinse screen	A	Y	28/08/2023	Closed	Week 35-Mini Shutdowm
137	LHS	Screens	Screen 1DMS01AT001-Prep	Beam replacement at Feed prep screen	A	Y	28/08/2023	Closed	Week 35-Shutdowm
14	RHS	Screens	Feed prep screen	Repair the feed prep screen underpan	A	Y	18/07/2023	Closed	Verstroy
15	RHS	Conveyors	Conveyor 27	Replace belt at Conveyor 27 and install the scraper / tail pulley no laggin	A	Y	18/07/2023	Closed	No working on this conveyor due to the second drum comissiong is about to start
158	LHS	Screens	1DMS11AT001	Drain screen thorough rail inspection, rail replacement wherever applicable	A	Y	29/08/2023	Closed	
159	LHS	Screens	1DMS11AT001	Replacement of drain screen's center rails and replacement of damaged side liner	A	Y	30/08/2023	Closed	
16	LHS	Piping/Channels	Composite Pipe	Replace composite pipe from the hydrocyclone to the sump of Pumps 41-42	A	Y	18/07/2023	Closed	Verstroy
17	Main Building	Conveyors	Tripper conveyer 10 Fine Ore Stockpile	Replace rollers at Tripper Conveyer 10 in Fine Ore Steckpile and repair the tripper's cable	A	Y	18/07/2023	Closed	Verstroy
176	RHS	Screens	1DMS05AT001	Feed prep screen bottom deck spray bar installation	A	Y	09/01/2023	Open	
18	RHS	DM Circuit	Spiral Classifier RHS	Replace the spool at the entrance to the double classifier.	A	Y	18/07/2023	Closed	

A Master Tracker was implemented to follow up on the RCA recommendations identified in order to avoid repeat failures

Description	Responsible Person	Status	Target Date	Comments
Formal training on the personnel who are doing work on Screen	Aytzhan Suindikov	Not started	TBA	
Develop a daily Operator checklist	Stephan Grobler	Completed	29/08/2023	
Implementing Daily Operator checklist for all the Vibrating screens	Adilet Rymbek / Ops Team	Not started	TBA	
Develop a Maintenance Checklist	Andries Malokane / Jesus Bulnes / Aytzhan Suindikov	Not started	TBA	
Mechanics need to attend the DMS Production to discuss the daily tasks	Adilet Rymbek / Aytzhan Suindikov	Not started	TBA	
Procure a vibration Analysis tool	Aytzhan Suindikov / Anna Boriskina	Not started	TBA	
Vibrating Analysis comprehensive reports on all Screens	Aytzhan Suindikov	Not started	TBA	

MOS/AMM

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
WEMCO Maintenance strategies	22/09/23	OEM manuals are required to develop checklists.	OEM manuals required to develop checklist.
DMS cone crusher Maintenance strategies	29/09/23	OEM manuals are required to develop checklists.	OEM manuals required to develop checklist.
Reporting and Downtime Analysis Dashboard	30/09/23	First iteration of modified dashboard introduced. Kazzinc now reviewing and adding comments.	Delayed feedback from site due to end of month and now personnel on annual leave.
Introduce and align Screen Maintenance strategies with Maintenance Area	05/10/23	Hatch will review and align the maintenance strategies to improve performance and prevent sudden failures.	Delayed response from Maintenance Management for discussion.
SIC Tool for Detection and Response	20/10/23	Currently evaluating Kazzinc's digital architecture landscape to develop a SIC (Short Interval Control) tool that enables prompt problem detection and response.	Potential for timing to be delayed due to access to data and iterative process of refining the tool.
Production / Performance Mapping & KPI Dashboard	20/10/23	Production dashboard to provide additional visibility on updated key production metrics (performance) for eventual decision making for each department area (e.g., Crushing, DMS, Main Building, Flotation, Filtration, etc).	Timing could be delayed due to access to data and iterative process of refining the process and dashboard.
Build a PowerBI Dashboard for Pumps (Using WEIR Minerals & Kazzinc Operator Checklists)	12/10/23	Hatch will develop Dashboard (PowerBI) to track and monitor pump status and maintenance requirements (similar fashion to conveyor dashboard).	Potential for delays to process due to sub-contractor contractual obligations.
Build a PowerBI Dashboard for Screens	19/10/23	Hatch will develop Dashboard (PowerBI) to track and monitor screen status and maintenance requirements (similar fashion to conveyor dashboard).	None.
DMS CM & DM Operator Training	3/11/23	Operator training for DMS CM & DM Checklists has begun, aiming for completion by 3/11/23.	Some delays due to RHS Reinstatement works and personnel shortages.

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Operational Readiness

OR

Work updates

Completed | Overdue/Delayed | Scheduled

	Task name	Due date	Status	Comments
✓	4th Filter Press Commissioning Plan	15/09/23	Completed	Checklists were created based on the OEM Product Manual and aligned with Kazzinc team.
	4th Filter Press Commissioning	25/09/23	In progress	Working closely with Kazzinc team in conducting inspections and punching.
	Boiler commissioning	31/10/23	In progress	C&I commissioning underway. In the meantime, Hatch will be reviewing commissioning documentation and compliance certificates to ensure the correct procedures were followed according to the OEM manual.
	DMS RHS Commissioning Execution	30/09/23	In Progress	C1 commissioning continuing. Activities will continue until start-up and commissioning. Good cooperation has been experienced from both Kazzinc and contractor teams.
	DMS RHS closing of punch items	30/09/23	In Progress	Punch items created during C1 inspections are captured in a master list and communicated and followed up with the installation contractor for close-out. Priority is placed on Cat A and B items.

OR

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
Planning of flotation commissioning	30/10/23	Org chart needs to be created and commissioning planning to be done for flotation initiatives other than Jameson cells	No known risks
New boiler automation	15/10/23	Boiler automation needs to be completed. Kazzinc team busy reviewing vendor proposal.	Procurement delay on pump

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Procurement Group

Procurement

Work updates

Completed | Overdue/Delayed | Scheduled

	Task name	Due date	Status	Comments
✓	Boiler Automation system check valves (3 off)– delivery	18/09/23	Completed	Delivered to site

Procurement

Work updates

Completed | Overdue/Delayed | Scheduled

	Task name	Explanation	Action required	Due date	Revised due date	Responsible
✗	DMS screens warranty replacements parts delivery to site	Customs clearance delays	Customs clearance completed and items collected on 19/09/23	19/09/23	22/09/23	Kazzinc logistics department
✗	DMS screens bottom deck order	Further additions made to the existing quotation, revised quotation to be received.	Order to be placed without additional items, which can be ordered separately Technical committee to be scheduled for 22/09/2023	31/08/23	22/09/23	Hatch/Kazzinc Technical committee
✗	KSD screens warranty replacement parts delivery	Delivered to Almaty on 16/09/23, customs clearance ongoing.	Customs clearance and delivery to site to be fast-tracked	13/09/23	25/09/23	Kazzinc logistics department
✗	Feed prep screens replacement parts	Delivered to Almaty on 20/09.	Customs clearance and delivery to site to be fast-tracked	13/09/23	30/09/23	Vendor/Kazzinc logistics department
✗	Actuators (Pneumatic cylinders) for DMS	On hold in Europe until sanctions screening is complete	Close cooperation with vendor to fast-track release	15/09/23	30/10/23	Vendor/Kazzinc logistics department
✗	Magnetics Separator Scrapers	Delivered to Almaty airport, customs clearance ongoing	Customs clearance and delivery to site to be fast-tracked	15/09/23	29/09/23	Kazzinc logistics department
✗	Jameson cell FCA collection from Vietnam (1st shipment -B4500 and Z1200 cells)	GT changed collection date from 15/09/23 to 19/09/23. Transportation agent selected.	Containers to be delivered to vendor on 22/09/23, collected from vendor on 28/09/23. ETD 01/10/23	15/09/23	28/09/23	Site logistics department

Procurement

Work updates

Completed | Overdue/Delayed | Scheduled

Task name	Due date	Comments	Risks
DMS and KSD flowmeters delivery to site	25/09/23	Expected delivery to site	Transport delays
KSD and KMD (tertiary) crusher liners delivery to site	25/09/23	Expected delivery to site	Transport delays
Jameson cell FCA collection from Vietnam (E8#1 cell)	27/09/23	Transport mode and route to be identified	Transport delays
Jameson cell FCA collection from Melbourne (equipment for Z1200, B4500, E8#1)	12/10/22	Transport mode and route to be identified, shipping agent to be selected	Transport delays
Jameson cell FCA collection from Vietnam ((E8#2 cell)	10/10/23	Transport mode and route to be identified	Transport delays
Spiral Classifier blades delivery to site	13/10/23	Expected delivery to site	Transport delays
Jameson cell FCA collection from Vietnam ((E6#1 and E6#2 cells)	18/10/23	Transport mode and route to be identified	Transport delays
Jameson cell FCA collection from Melbourne (equipment for E8#2)	20/10/23	Transport mode and route to be identified	Transport delays
Jameson cell FCA collection from Melbourne (equipment for E6#1)	31/10/23	Transport mode and route to be identified	Transport delays
Jameson cell FCA collection from Melbourne (equipment for E6#2)	09/11/23	Transport mode and route to be identified	Transport delays

Boiler Valves – procurement status

Valve description	Quantity		Expected on site	Status	Comments
Shut-off valve 15c965нж DN 200 PN 16 (ст.20Л) with kit of counter flanges and electric actuator (220 V, 50 Hz))	2		12-17/10/2023 (Contract delivery date 25/10/2023)	Manufacturing	Tailor made
Check valve 15c65нж DN 200 PN 16	*2*	*Temporary solution*	*On site*	*On site Delivered on 18/09/2023*	*Manual*
Shut-off valve 15c965нж DN300 PN16 Ст.20Л, with kit of counter flanges and electric actuator (220 V, 50 Hz)	1		12-17/10/2023 (Contract delivery date 25/10/2023)	Manufacturing	Tailor made
Check valve 15c65нж DN 300 PN 16	*1*	*Temporary solution*	*On site*	*On site Delivered on 18/09/2023*	*Manual*
Control valve 3241/3374 DN50 PN16	2		On site	On site Delivered on 08/09/2023	To be inspected

Check valves delivered to site on 18/09/2023

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Owner’s Engineer Update

Flotation design. Owner's engineering.

Coordination of design institutes in Kazakhstan.

Schedule of Projects.

5	**Expansion of the Zn-Py flotation front.**	
	Design	31.05.2023-28.12.20213
	Expert review of design documentation	25.12.20213 + 45days
	Construction and installation works	01.08.23 -14.04.24 starting construction before a review decision has been obtained is a serious risk, even up to demolition.

6	**Jameson cells**	
	Design	There is no contract. No schedule.
	Expert review of design documentation	
	Construction and installation works	

14.09.23 - The documentation was not handed over in full.
As of 19.09.23, no additional information has been passed on.

	Project name	**Project Status**
1	Replacement of equipment in the "Main Building of the Concentrator" due to increase of slimes content in ore.	The project is done. Foundation structures are being installed. Construction and installation work: 26.08.23 -11.01.24
2	Installation of 4 x 38m3 Turkish cells.	The project is done. Installation is complete.
3	Installation of 3 x 5m3 cleaner cells into slimes circuit.	The design is complete. Foundation structures are being installed. Construction and installation work: schedule for foundations only 01.09.23-25.09.23
4	Installation of shaking tables for Pb flotation.	The project is done. Foundation structures are being installed. Construction and installation work: schedule for foundations only 01.09.23-17.09.23
5	Installation of 10 x additional 50m3 Turkish cells (Zn Scavenger)	The project is developed . 31.05.23-28.12.23 Foundation structures are being installed. Construction and installation work: 01.08.23 -14.04.24
6	Installation of 6 x Jameson cells.	Transmission of input data to the contractor. No design schedule was provided on the part of the design institute. In development.

Flotation design. Owner's engineering. Review of projects - comments.

	Project name	Project Analysis.		Comments
1	Replacement of equipment in the "Main Building of the Concentrator" due to increase of slimes content in ore.	VS - Air supply. TV - Process Water Supply. TX - Technical Solutions . TX.IT.- initial requirements for development of non-standard equipment		No ATX section. No ES, EM sections.
2	Installation Krebs hydrocyclone for classifying Zn concentrate	KZh - Reinforced Concrete Structures	-	No ATX section. No ES, EM sections.
3	Increase of cleaner operations in the Slime Circuit when processing Pb-Zn ores	KM - Metal Structures TX - Technical Solutions		No ATX section. No ES, EM sections.
4	Pb concentrate upgrade by gravity concentration methods .	KM - Metal Structures TX - Technical Solutions TK - Process Connections.		No ATX section. No ES, EM sections.
5	Flotation capacity increase. Modernization of existing production	VS - Air supply. KM - Metal Structures KZh - Reinforced Concrete Structures TK - Process Connections.		No ATX section. No ES, EM sections.
6	Jameson cells			No design. Input data for the design have been developed by Hatch.

Flotation design. Owner's engineering. Risks identified but not resolved.

	Project name	Name of section and risk identification		Comments
1	Replacement of equipment in the "Main Building of the Concentrator" due to increase of slimes content in ore.	AK, ATX		The schedule does not consider the time for installation and commissioning of equipment and cable routes for instrumentation and control systems and automated control system.
2	Installation Krebs hydrocyclone for classifying Zn concentrate		-	
3	Increase of cleaner operations in the Slime Circuit when processing Pb-Zn ores	ATX, EM		The schedule for Installation of 3 flotation machines in slimes flotation does not include time for installation and commissioning works for equipment and cable routes of instrumentation and control systems, automated control system, as well as for power supply. TK-KZ-KZC2-2022-E-902 TK CELLS CONSUMPTION LIST. Error in volumes.
4	Pb concentrate upgrade by gravity concentration methods .	ATX, EM		-The schedule for Installation does not include time for installation and commissioning works for equipment and cable routes of instrumentation and control systems, automated control system, as well as for power supply.
5	Flotation capacity increase. Modernization of existing production	KZh - Reinforced concrete structures (Assessment of the tilting risk for building frame foundation) ATX EM		-Calculation is required to confirm that the additional pressure from the new foundations of the 50 m3 flotation cells on the ground will not cause uneven settlement and tilt of the foundations of the main frame of the building and, as a consequence, will not lead to the formation of destructive forces not taken into account in the calculation of the structural elements of the main frame of the building. The designer shall confirm by calculation that there is no need to reinforce the soil under the foundations of the building and equipment. -The schedule of TK-50 works provides only 4 days for works of ATX section, which looks like insufficient time. Planned work is not specified. -The work schedule specifies temporary technical solutions, without details. Also it is not acceptable for sending to the expert review.
6	Jameson cells			