SMC REPAIRS & MAINTENANCE

SAN MIGUEL CORPORATION

To : **MV Aballe /JR Dacalano** **February 14, 2023**

Thru : **RB Nazareno**

From : **JRH Marquez/ IT Salenga, Jr.**

Subject: **SMC RMI Key Performance Metrics, Projects and Activities.**

Submitting for your appreciation a compilation of Key Performance Indicators (January, 2023) as agreed and stipulated in our maintenance agreement, as follows:

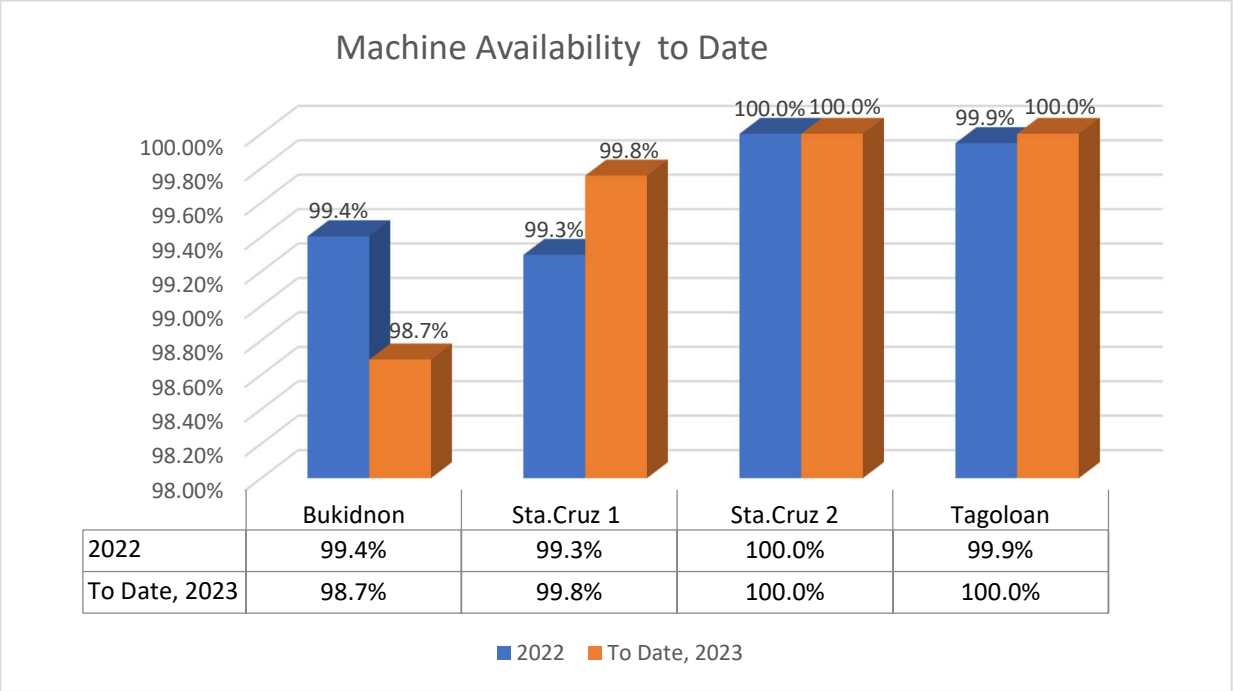
Key Performance Indicators				
Plant	Bukidnon	Sta. Cruz 1	Sta. Cruz 2	Tagoloan
Total Work Order Notification	511	1,035	442	1,593
Total Work Order Completed	511	1,032	442	1,548
Work Order Completion **(>90.0%)**	**100.0%**	**99.7%**	**100.0%**	**97.2%**
Total Number of Reworks	0	0	0	1
Rework **(<3.0%)**	**0.0%**	**0.0%**	**0.0%**	**0.1%**

To further evaluate the performance of SMC RMI in maintaining SMFI plants, details of parameters of KPI are as follows, Machine Availability, Mean Time Between Failure (MTBF) and Mean Time to Repair (MTTR). Also Included in this report are the maintenance and fabrication activities accomplished January, 2023.

I. Machine Availability

Machine Availability - is the percent of the time that the equipment is available for use (Run Time), divided by the planned production time. The equipment downtime is computed when production output becomes affected.

Plant	**2020**	**2021**	**2022**	**To Date, 2023**
Bukidnon	-	-	99.4%	98.7%
Sta.Cruz 1	96.4%	98.6%	99.3%	99.8%
Sta.Cruz 2		-	100.0%	100.0%
Tagoloan	97.9%	99.0%	99.9%	100.0%



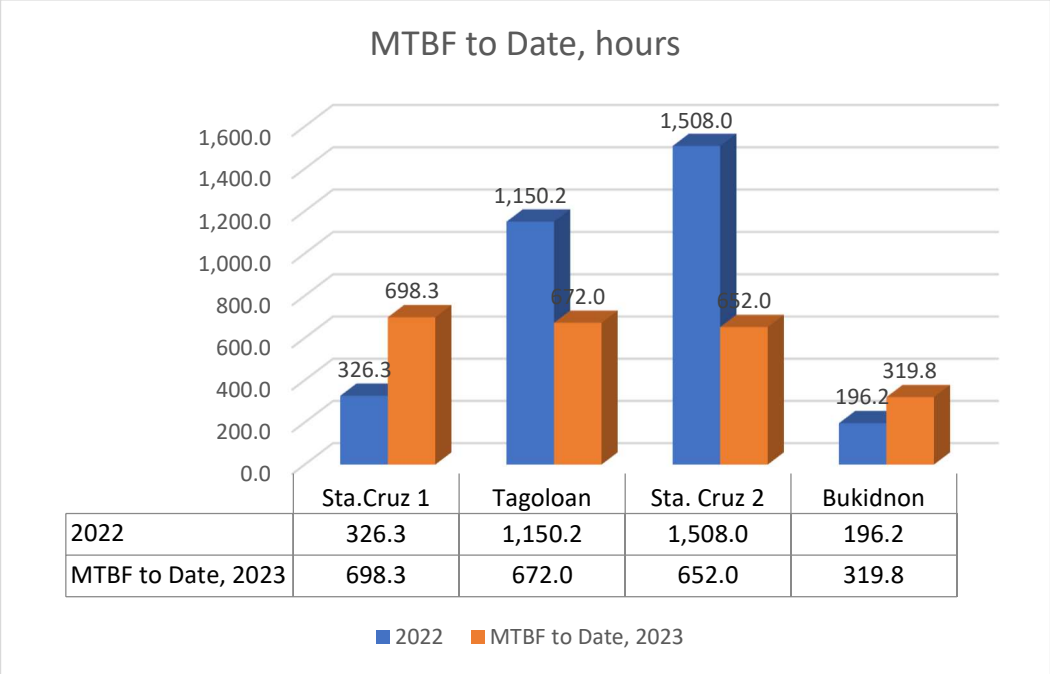
	Bukidnon	Sta.Cruz 1	Sta.Cruz 2	Tagoloan
2022	99.4%	99.3%	100.0%	99.9%
To Date, 2023	98.7%	99.8%	100.0%	100.0%

*Period is from January 01-31, 2023.

To date, Sta. Cruz 2 and Tagoloan plants got 100.00% machine availability, followed by Sta. Cruz 1 at 99.8%, while Bukidnon got the lowest at 98.7%.

II. Mean Time Between Failure (MTBF)

Mean Time Between Failure (MTBF) - is the elapsed time between all inherent failures of equipment during normal system operation. It is computed by dividing Run Time to the total Number of Equipment Failures (affecting production).



	Sta.Cruz 1	Tagoloan	Sta. Cruz 2	Bukidnon
2022	326.3	1,150.2	1,508.0	196.2
MTBF to Date, 2023	698.3	672.0	652.0	319.8

MTBF to Date, hours				
	Sta.Cruz 1	Tagoloan	Sta. Cruz 2	Bukidnon
2020	47.3	115.9	-	-
2021	92.3	222.1	-	-
2022	326.3	1,150.2	1,508.0	196.2
MTBF to Date, 2023	698.3	672.0	652.0	319.8

*Period is from January 01-31, 2023.

To date, the plant with longest time before a machine failed was Sta. Cruz 1 at 698.3 hours, followed by Tagoloan with 672.0 hours and Sta. Cruz at 652.0 hours, while Bukidnon got the lowest at 319.8 hours.

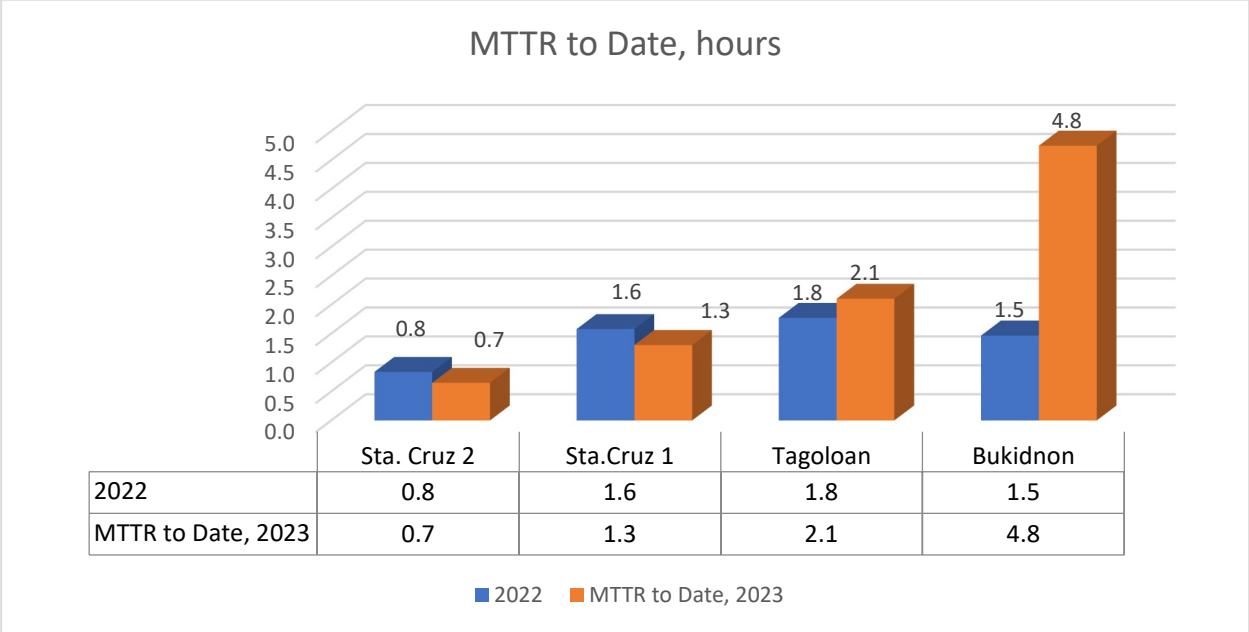
Machine Downtime (Affecting Production) for the Month of January

Bukidnon (Affecting Production)							Spare Details	
Equipment	Section	Description	Downtime, Hours	Frequency	Total Downtime, Hours	Total Frequency	Remarks	Spare Part
Bucket Elevator	Batching Line - Line1	Worn-out head drum shaft	8.00	1	8.00	1	No Spare	Head drum shaft
Belt Conveyor	Bagging Line - Line1	Damaged bearing	0.50	1	0.50	1	-	-

Sta. Cruz (Affecting Production)							Spare Details	
Equipment	Section	Description	Downtime, Hours	Frequency	Total Downtime, Hours	Total Frequency	Remarks	Spare Part
Trough Chain Conveyor	Truck - Intake Line	Broken chain link	1.70	1	1.70	1	-	-

III. Mean Time To Repair (MTTR)

Mean Time To Repair (MTTR) - Mean Time To Repair MTTR is a measure of the maintainability of machines and effectiveness of the repair and maintenance system. It is a maintenance metric that measures the average time required to troubleshoot and complete repair a failed equipment. It is computed by dividing the Repair Duration to the Number of Equipment Completed Repairs.



MTTR to Date, hours				
	Sta. Cruz 2	Sta.Cruz 1	Tagoloan	Bukidnon
2020	-	1.6	1.9	-
2021	-	1.7	2.0	-
2022	0.8	1.6	1.8	1.5
MTTR to Date, 2023	0.7	1.3	2.1	4.8

*Period is from January 01-31, 2023.

The plant with shortest repair time is Sta. Cruz 2 at 0.7 hour, followed by Sta. Cruz 1 at 1.6 hours, and Tagoloan at 2.1 hours, while Tagoloan got the longest hour at 4.8 hours.

SAP Preventive Maintenance Update for January

JANUARY			
	STA. CRUZ 1	STA. CRUZ 2	TAGOLOAN
TOTAL OUTSTANDING WO	526	151	1,161
TOTAL COMPLETED WO (SMCRMI)	523	151	1,116
% COMPLETED WO (SMCRMI)	99.43%	100.00%	99.21%
TOTAL COMPLETED WO	523	138	977
% COMPLETED WO	100.00%	91.39%	87.54%

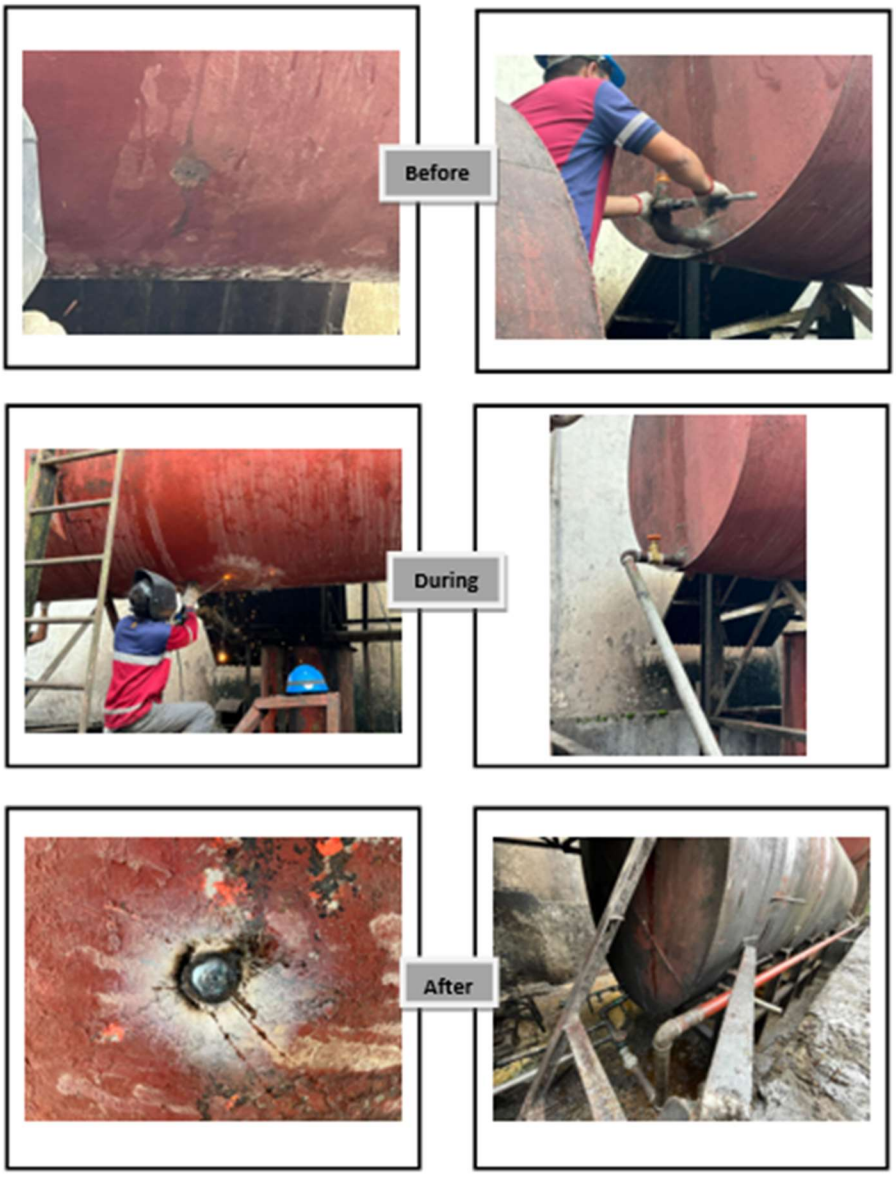
Unaccomplished work orders for Sta. Cruz 1 and Tagoloan were due to continuous plant operations.

PROJECTS AND ACTIVITIES

January 2023

I. BUKIDNON

1. Patch-welding of holes on molasses tank and replacement of pipe line to oil transfer pump.

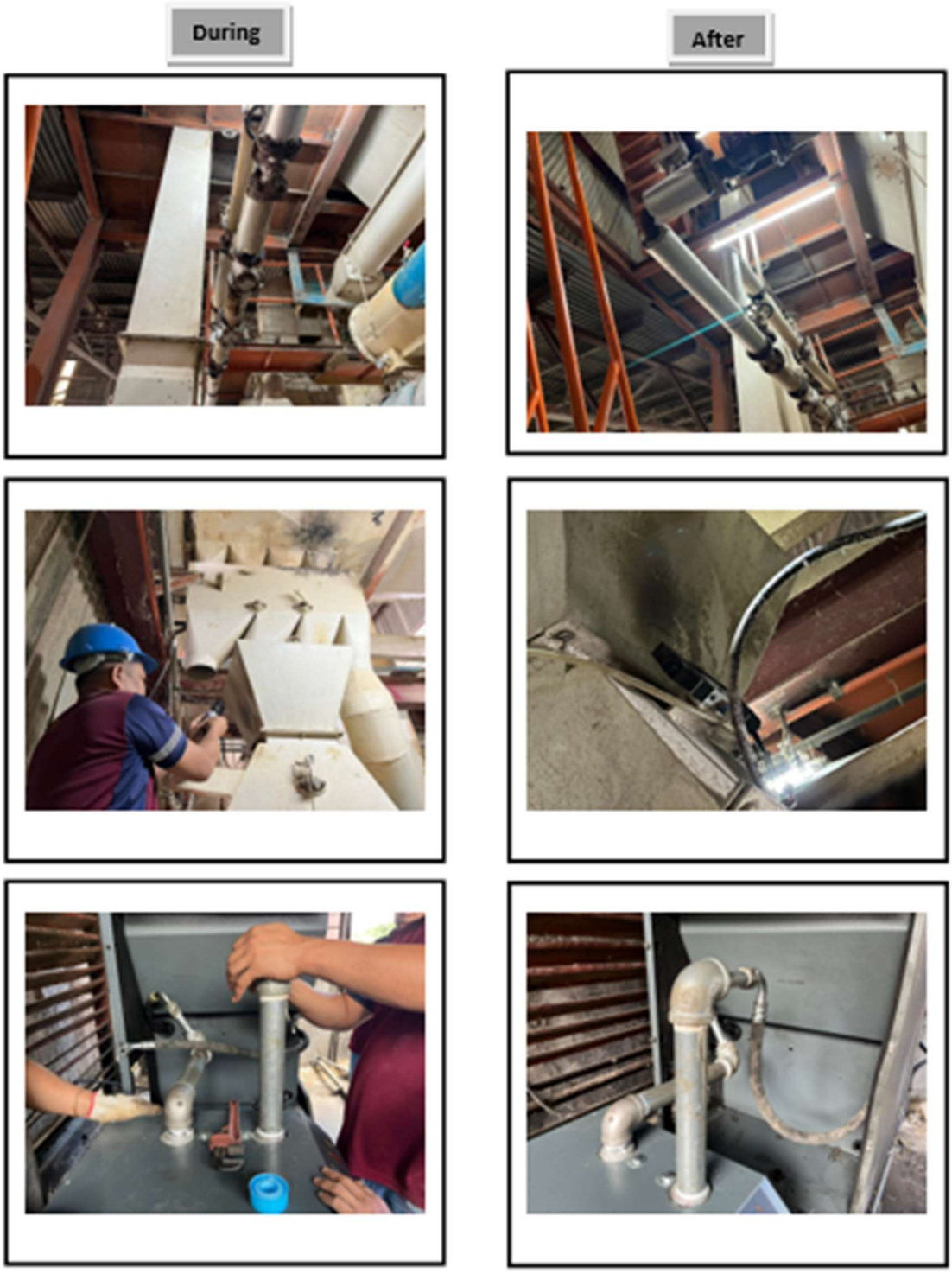


To prevent leaks and for new oil storage tank.

2. Installation of new diesel and water pipe system from diesel tank to "Cummins" generator set.

To ease access for diesel and water whenever needed.

3. Servicing of various plant equipment.



For plant corrective and preventive maintenance.

II. STA. CRUZ I

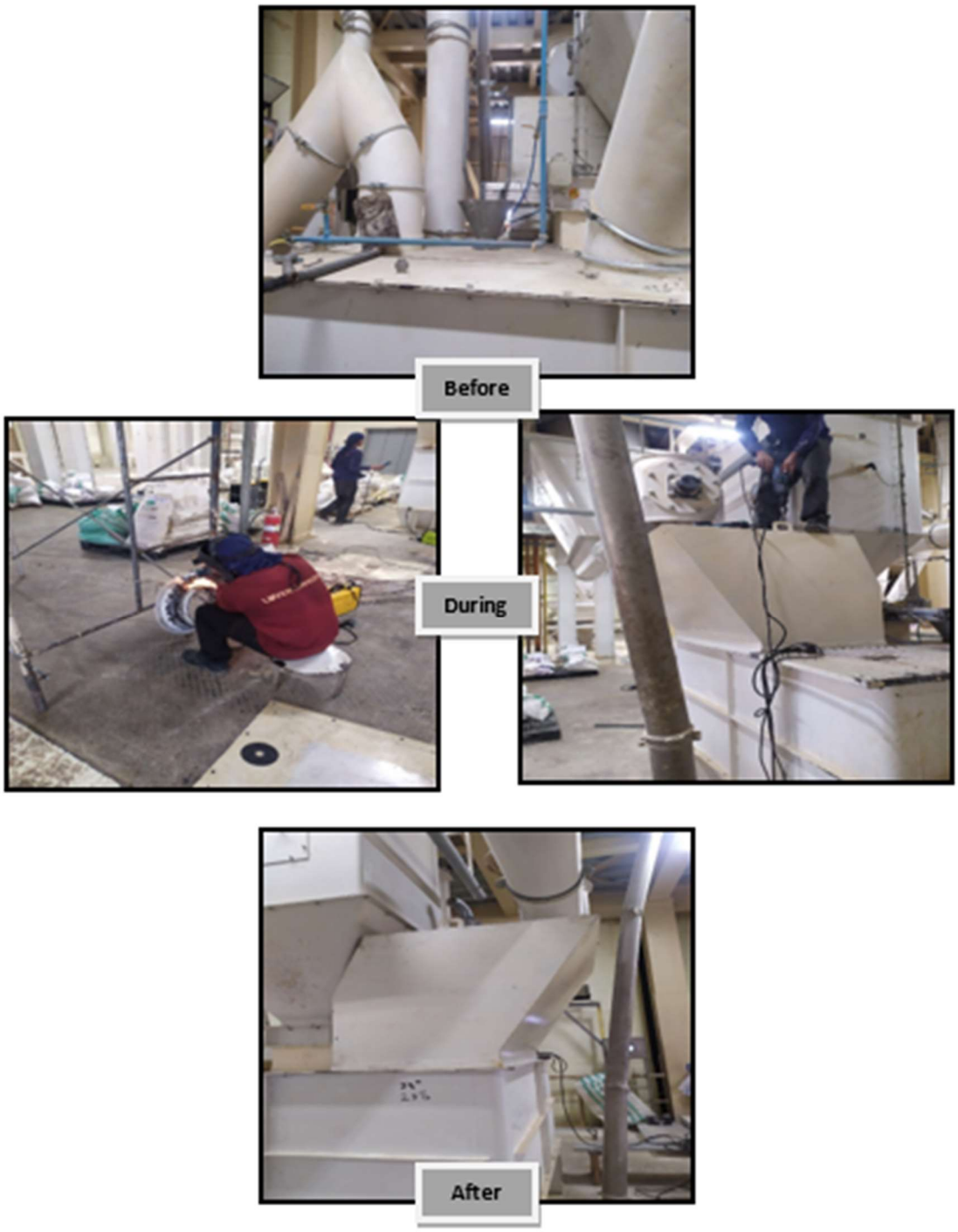
1. Replacement of bellows on various sewing machines at bagging lines 1, 3 & 4. Support modification at bagging line 3.

To avoid oil leakage from each machine and have better support at bagging line 3.

2. Fabrication of bucket elevator platform for A-1850 MGEL.

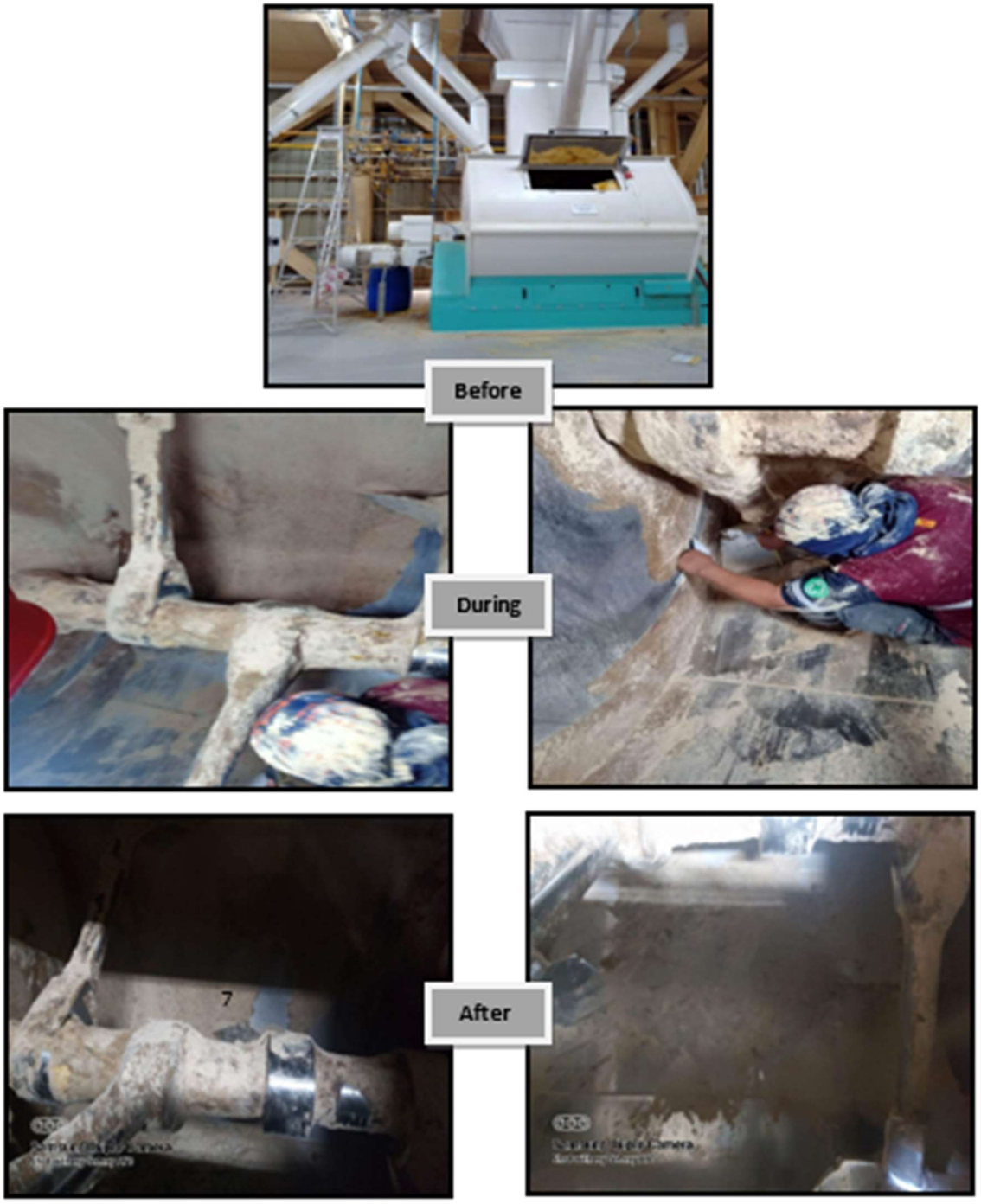
To ease access when replacing head pulley.

3. Installation of hopper at 4th floor holding bin.



For better dispensing.

4. Inspection of paddle clearance at mixing line 1-2.



To ensure standard clearance is met by the paddles for smooth operation of the machine.

III. STA. CRUZ II

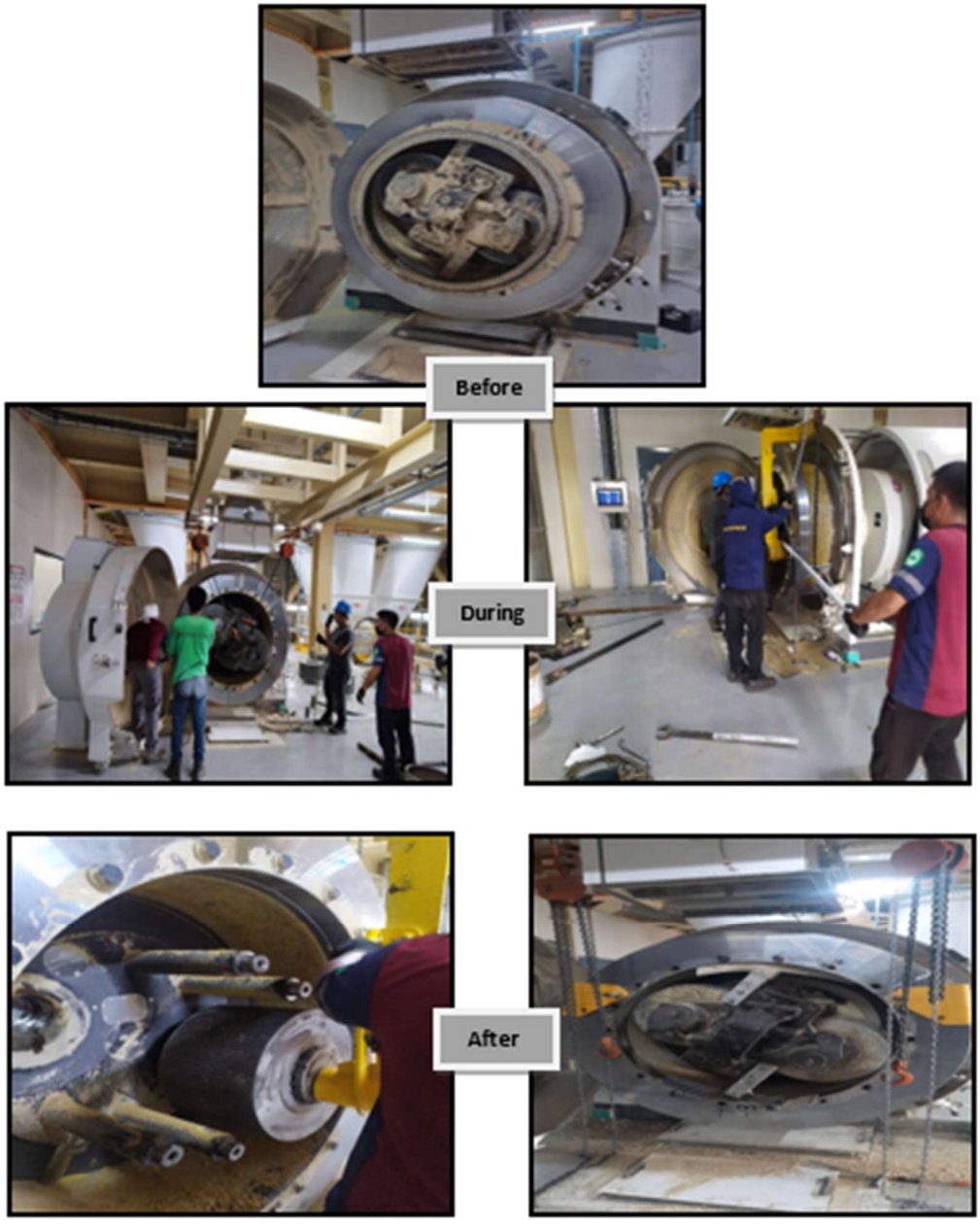
1. Hauling of DPEF Press roll from ground floor to 3rd floor production tower

This was done as part of projects for Tower 2. SMCRMI modified and installed east Slurry Pipeline connection to Resolve the problem of low Injection of yeast slurry during operation which results in lesser batching compared to the standard output.

2. Servicing and cleaning of various machines.

This was done as part of In-service and Out-Service preventive maintenance planned to ensure smooth running of machines.

3. Replacement of pellet mill rolls for DPEF.



This was done during the Scheduled Preventive Maintenance Activity in which the production hit the target allocation within a week. SMCRMI replaced 2 pcs DPEF press roll assembly as requested by production due to the worn-out condition of the press roll groove.

IV. TAGOLOAN

1. Fabrication of return piping line for diesel dispenser.

For requirement compliance by Petron.

2. Fabrication of tower 2 wire cover.

For organization of trash bins.