



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section
Course

Master
(PMG506)

Code
Thursday

Date

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Advanced project Management

Instructions:

- اخر موعد للتسليم هو يوم الخميس 2021-05-20 في تمام الساعة 9 مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الإنجليزية.
- يتم تسليم المشروع في صيغة ملف pdf . مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion ، وأخيراً المراجع References . وان كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط 12.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر 1.5 line spacing

• عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: ~~Eng. Amaal Aburumman~~ **Eng. Dr. Akram M. S. Ali**

Project:

You are required to document your role in administering a project. The project may be set in a business, social, sporting, or family environment but must be of a significant size and scale. If you do not have an actual project to write about you may complete the project hypothetically.

This report will be between three to six pages in length. This is a significant research project.

Your report must address ~~each~~ **ONE** of the following issues:

1. Identify and describe the purpose, scope, and objectives of the project. **Display this information using an appropriate tool.**
2. Describe how the team is given an outline of the project.
3. Describe the strategies that are going to be set up to maintain communication with the team members.
4. Describe the tools that are going to be used to monitor the goals, time frames or milestones.
5. Identify project milestones and activities. **Display this information using an appropriate tool.**
6. Create a budget and link the costs to the key milestones for a project.
7. Describe how you are going to divide tasks and resources amongst a project team. **Display this information using an appropriate tool.**
8. Briefly describe how the progress will be monitored.
9. How are current project records maintained? Who has responsibility for this? provide some recommendations on how this process could be improved.
10. Describe the current procedure for finalizing projects. Create your own procedure and identify how you will evaluate the success of the project.
11. Legislation that may affect the project including health and safety, and anti-discrimination legislation.

Best of luck...

المشروع:

مطلوب منك توثيق دورك في إدارة مشروع. قد يتم تعيين المشروع في بيئة تجارية أو اجتماعية أو رياضية أو عائلية ولكن يجب أن يكون بحجم مناسب. إذا لم يكن لديك مشروع فعلي لتكتب عنه ، فيمكنك إكمال المشروع افتراضياً. سيكون هذا التقرير من ثلاث إلى ست صفحات.

يجب أن يعالج تقريرك ~~كل~~ **احد** القضايا التالية:

1. تحديد ووصف الغرض والنطاق والأهداف من المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
2. صف كيف يتم إعطاء الفريق مخططاً تفصيلياً للمشروع.
3. وصف الاستراتيجيات التي سيتم وضعها للحفاظ على التواصل مع أعضاء الفريق.
4. صف الأدوات التي سيتم استخدامها لرصد الأهداف أو الأطر الزمنية أو المعالم.
5. تحديد معالم المشروع والأنشطة. اعرض هذه المعلومات باستخدام أداة مناسبة.
6. إنشاء موازنة وربط التكاليف بالمعالم الرئيسية للمشروع.
7. صف كيف ستقوم بتقسيم المهام والموارد بين فريق المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
8. صف بإيجاز كيف سيتم رصد التقدم.
9. كيف يتم الاحتفاظ بسجلات المشروع الحالية؟ من المسؤول عن هذا؟ تقديم بعض التوصيات حول كيفية تحسين هذه العملية.
10. وصف الإجراء الحالي لإنهاء المشاريع. قم بإنشاء الإجراء الخاص بك وحدد كيفية تقييم نجاح المشروع.
11. التشريعات التي قد تؤثر على المشروع بما في ذلك الصحة والسلامة ، وتشريعات مكافحة التمييز.

مع تمنياتي بالتوفيق..

New High-Speed Slitter (HSS) Line in Finishing Dept

INTRODUCTION

Rolling Mill Company is equipped with the necessary facilities for production of aluminum coils as per the below mentioned customer requirement;

- Beverage can body stock (3004 or 3104 H19 alloy),
- Beverage can end stock (5182 and 5082 H19 alloy),
- Beverage can tab stock (5182 and 5082 H19 alloy).
- Automotive sheet

The above aluminum coils are produced from the ingots received from the Cast-house by passing the same through various process departments such as Hot Mill, TCM and Finishing.

The facility is divided into several areas. The Hot Rolling Line consists of a Single-Sided Scalper, two Pusher-type Pre-heat Furnaces, a Single-Stand Reversing Mill, a Heavy Shear, a Light Shear, and a four-stand Hot Continuous Mill. The cold rolling area includes a Tandem Cold Mill. A floor-level automated storage and retrieval system manages in-process inventory coming off the hot strip mill and cold mill. Finishing area includes one Coating line, one Pit Slitter, one High Speed Slitter and a Packing and Shipping area. The finished coiled product is stored in the finished goods storage area before being shipped via truck.

Rolling Mill Company has recently approved the new high-speed slitter (HSS) line project to move forward for project initiation within the Central Engineering & Project Department. This project will result in meeting the increased demand for beverage can material and achieve annual capacity of the aluminum rolling facility by 380,000 tons/year.

Rolling Mill Company has been successful in gaining market share because of its aggressive pursuit of product quality, ease of use, flexibility, and customer service. Additionally, customers understand that our products may be applied to a wide range of uses for business and personal functions. By leveraging our reputation for superior quality and user-friendly products, and capitalizing on new technology, Rolling Mill Company can position itself as the premier provider of Beverage cans & Automotive sheets in today's marketplace.

PROJECT MANAGEMENT APPROACH

The Project Manager, Mohammed Al-Ahmari, has the overall authority and responsibility for managing and executing this project according to this Project Plan and its Subsidiary Management Plans. The project team will consist of personnel from the coding group, quality control/assurance group, technical writing group, and testing group. The project manager will work with all resources to perform project planning. All project and subsidiary management plans will be reviewed and approved by the project sponsor. All funding decisions will also be made by the project sponsor. Any delegation of approval authority to the project manager should be done in writing and be signed by both the project sponsor and project manager.

The project team will be a matrix in that team members from each organization continue to report to their organizational management throughout the duration of the project. The project manager is responsible for communicating with organizational managers on the progress and performance of each project resource.

PROJECT SCOPE

The scope of new high-speed slitter project includes the planning, design, manufacturing, installation, Commission & hand over the line to operations team. his project will meet or exceed organizational standards and additional requirements established in the project charter. The scope of this project also includes completion of

all documentation, manuals, and training aids to be used in conjunction with the project. Project completion will occur when the new line and documentation package has been successfully executed and transitioned to Rolling Mill operations group for production. All project work will be performed externally through many vendors and contractors outsourcing.

MILESTONE LIST

The below chart lists the major milestones for the new high-speed slitter Project. This chart is comprised only of major project milestones such as completion of a project phase or gate review. There may be smaller milestones which are not included on this chart but are included in the project schedule and WBS. If there are any scheduling delays which may impact a milestone or delivery date, the project manager must be notified immediately so proactive measures may be taken to mitigate slips in dates. Any approved changes to these milestones or dates will be communicated to the project team by the project manager.

Milestone	Description	Date
Procurement & PO Placement	All requirements for new line must be determined to base design upon	14 Jan 20
Detailed Engineering & IFC	All studies which create a full definition of every aspect of a project development. It includes all the studies to be performed before project construction starts	20 Oct 20
Manufacturing & Shipment at site	steps through which raw materials are transformed into a final product. The manufacturing process begins with the product design, and materials specification from which the product is made	30 May 21

Construction to Mechanical Completion	As the state where all systems including utility and auxiliary facilities have reached the condition “Ready to Use “and are certified by the Construction Chief”	30 Jun 21
Cold Commissioning	The functional tests of each Equipment Unit to be performed at the Construction Site without load in accordance with the Contract.	31 Jul 21
First Coil & Hot Commissioning	Refers to a phase when the plant and systems are energized. It is when the actual performance of the individual plant components is demonstrated and confirmed against their specified performance	31 Aug 21
SAT	is the process of ensuring that the system is fully operational as compared to the project requirements	10 Sep 21

SCHEDULE BASELINE AND WORK BREAKDOWN STRUCTURE

The WBS for the new high speed slitter Project is comprised of work packages which do not exceed 40 hours of work but are at least 4 hours of work. Work packages were developed through close collaboration among project team members and stakeholders with input from functional managers and research from past projects.

The WBS Dictionary defines all work packages for the new high speed slitter Project. These definitions include all tasks, resources, and deliverables. Every work package in the WBS is defined in the WBS Dictionary and will aid in resource planning, task completion, and ensuring deliverables meet project requirements.

The new high speed slitter Project schedule was derived from the WBS and Project Charter with input from all project team members. The schedule was completed, reviewed by the Project Sponsor, and approved and base-lined. The schedule will be

maintained as a MS Project Gantt Chart by the new high speed slitter Project Manager. Any proposed changes to the schedule will follow Rolling Mill company change control process. If established boundary controls may be exceeded, a change request will be submitted to the Project Manager. The Project Manager and team will determine the impact of the change on the schedule, cost, resources, scope, and risks. If it is determined that the impacts will exceed the boundary conditions then the change will be forwarded to the Project Sponsor for review and approval. The new high speed slitter boundary conditions are:

CPI less than 0.8 or greater than 1.2

SPI less than 0.8 or greater than 1.2

If the change is approved by the Project Sponsor, then it will be implemented by the Project Manager who will update the schedule and all documentation and communicate the change to all stakeholders in accordance with the Change Control Process.

The Project Schedule Baseline are provided in Appendix A.

CHANGE MANAGEMENT PLAN

The following steps comprise Rolling Mill organization change control process for all projects and will be utilized on the new high speed slitter project:

Step #1: Identify the need for a change (Any Stakeholder)

Requestor will submit a completed Rolling Mill change request form to the project manager

Step #2: Log change in the change request register (Project Manager)

The project manager will maintain a log of all change requests for the duration of the project

Step #3: Conduct an evaluation of the change (Project Manager, Project Team, Requestor) The project manager will conduct an evaluation of the impact of the change to cost, risk, schedule, and scope

Step #4: Submit change request to Change Control Board (CCB) through (Project Manager)

The project manager will submit the change request and analysis to the CCB for review

Step #5: Change Control Board decision (CCB)

The CCB will discuss the proposed change and decide whether or not it will be approved based on all submitted information

Step #6: Implement change (Project Manager)

If a change is approved by the CCB, the project manager will update and re-baseline project documentation as necessary as well as ensure any changes are communicated to the team and stakeholders

Any team member or stakeholder may submit a change request for the new high speed slitter Project. The new high speed slitter Project Sponsor will chair the CCB and any changes to project scope, cost, or schedule must meet his approval. All change requests will be logged in the change control register by the Project Manager and tracked through to completion whether approved or not.

COMMUNICATIONS MANAGEMENT PLAN

This Communications Management Plan sets the communications framework for this project. It will serve as a guide for communications throughout the life of the project and will be updated as communication requirements change. This plan identifies and defines the roles of new high speed slitter project team members as they pertain to communications. It also includes a communications matrix which maps the communication requirements of this project, and communication conduct for meetings

and other forms of communication. A project team directory is also included to provide contact information for all stakeholders directly involved in the project.

The Project Manager will take the lead role in ensuring effective communications on this project. The communications requirements are documented in the Communications Matrix below. The Communications Matrix will be used as the guide for what information to communicate, who is to do the communicating, when to communicate it, and to whom to communicate.

Communication Type	Description	Frequency	Format	Participants/ Distribution	Deliverable	Owner
Weekly Status Report	Email summary of project status	Weekly	Email	Project Sponsor, Team and Stakeholders	Status Report	Project Manager
Weekly Project Team Meeting	Meeting to review action register and status	Weekly	In Person	Project Team	Updated Action Register	Project Manager
Project Monthly Review (PMR)	Present metrics and status to team and sponsor	Monthly	In Person	Project Sponsor, Team, and Stakeholders	Status and Metric Presentation	Project Manager
Project Gate Reviews	Present closeout of	As Needed	In Person	Project Sponsor,	Phase completion	Project Manager

	project phases and kickoff next phase			Team and Stakeholders	n report and phase kickoff	
Technical Design Review	Review of any technical designs or work associated with the project	As Needed	In Person	Project Team	Technical Design Package	Project Manager

Project team directory for all communications is:

Name	Title	E mail	Office Phone	Cell Phone
Abdulaziz Arwailiy	Project Sponsor	A.rwailiy@mrc.com	XXX-XXX-XXXX	XXX-XXX-XXXX
Mohammed Al-Ahmari	Project Manager	Mahamari@mrc.com	XXX-XXX-XXXX	XXX-XXX-XXXX
Mohammed Riyas	Mechanical Project Engineer	R.Mohammed@mrc.com	XXX-XXX-XXXX	XXX-XXX-XXXX
Sameer Shikh	Electrical Project Engineer	sameerk@mrc.com	XXX-XXX-XXXX	XXX-XXX-XXXX
Dahl Garcia	Sr. Quality Specialist	D.Garcia@mrc.com	XXX-XXX-XXXX	XXX-XXX-XXXX

Mark Thompson	Quality Specialist	<u>MarkT@ mrc.com</u>	XXX-XXX-XXXX	XXX-XXX-XXXX
Khalid Al-Yami	Technical Writer	<u>yamiK@ mrc.com</u>	XXX-XXX-XXXX	XXX-XXX-XXXX
Mohammed Al-Garni	Testing Specialist	<u>GarniM@mrc.com</u>	XXX-XXX-XXXX	XXX-XXX-XXXX

Communications Conduct:

Meetings:

The Project Manager will distribute a meeting agenda at least 2 days prior to any scheduled meeting and all participants are expected to review the agenda prior to the meeting. During all project meetings the timekeeper will ensure that the group adheres to the times stated in the agenda and the recorder will take all notes for distribution to the team upon completion of the meeting. It is imperative that all participants arrive to each meeting on time and all cell phones and blackberries should be turned off or set to vibrate mode to minimize distractions. Meeting minutes will be distributed no later than 24 hours after each meeting is completed.

Email:

All email pertaining to the new high speed slitter Project should be professional, free of errors, and provide brief communication. Email should be distributed to the correct project participants in accordance with the communication matrix above based on its content. All attachments should be in one of the organization's standard software suite programs and adhere to established company formats. If the email is to bring an issue forward then it should discuss what the issue is, provide a brief background on the issue, and provide a recommendation to correct the issue. The Project Manager should be included on any email pertaining to the new high speed slitter Project.

Informal Communications:

While informal communication is a part of every project and is necessary for successful project completion, any issues, concerns, or updates that arise from informal discussion between team members must be communicated to the Project Manager so the appropriate action may be taken.

COST MANAGEMENT PLAN

The Project Manager will be responsible for managing and reporting on the project's cost throughout the duration of the project. The Project Manager will present and review the project's cost performance during the monthly project status meeting. Using earned value calculations, the Project Manager is responsible for accounting for cost deviations and presenting the Project Sponsor with options for getting the project back on budget. All budget authority and decisions, to include budget changes, reside with the new high speed slitter Project Sponsor.

For the new high speed slitter Project, control accounts will be created at the fourth level of the WBS which is where all costs and performance will be managed and tracked. Financial performance of the new high speed slitter Project will be measured through earned value calculations pertaining to the project's cost accounts. Work started on work packages will grant that work package with 50% credit; whereas, the remaining 50% is credited upon completion of all work defined in that work package. Costs may be rounded to the nearest dollar and work hours rounded to the nearest whole hour.

Cost and Schedule Performance Index (CPI and SPI respectively) will be reported on a monthly basis by the Project Manager to the Project Sponsor. Variances of 10% or +/- 0.1 in the cost and schedule performance indexes will change the status of the cost to yellow or cautionary. These will be reported and if it's determined that there is no or minimal impact on the project's cost or schedule baseline then there may be no action required. Cost variances of 20%, or +/- 0.2 in the cost and schedule performance indexes will change the status of the cost to red or critical. These will be reported and

require corrective action from the Project Manager in order to bring the cost and/or schedule performance indexes back in line with the allowable variance. Any corrective actions will require a project change request and be must approved by the CCB before it can be implemented.

Earned value calculations will be compiled by the Project Manager and reported at the monthly project status meeting. If there are indications that these values will approach or reach the critical stage before a subsequent meeting, the Project Manager will communicate this to the Project Sponsor immediately.

PROCUREMENT MANAGEMENT PLAN

The Project Manager will provide oversight and management for all procurement activities under this project. The Project Manager is authorized to approve all procurement actions up to \$50,000. Any procurement actions exceeding this amount must be approved by the Project Sponsor.

While this project requires minimal or no procurement, in the event procurement is required, the Project Manager will work with the project team to identify all items or services to be procured for the successful completion of the project. The Project Manager will then ensure these procurements are reviewed by the Program Management Office (PMO) and presented to the contracts and purchasing groups. The contracts and purchasing groups will review the procurement actions, determine whether it is advantageous to make or buy the items or resource required services internally, and begin the vendor selection, purchasing and the contracting process.

In the event a procurement becomes necessary, the Project Manager will be responsible for management any selected vendor or external resource. The Project Manager will also measure performance as it relates to the vendor providing necessary goods and/or services and communicate this to the purchasing and contracts groups.

PROJECT SCOPE MANAGEMENT PLAN

Scope management for the new high speed slitter Project will be the sole responsibility of the Project Manager. The scope for this project is defined by the Scope Statement, Work Breakdown Structure (WBS) and WBS Dictionary. The Project Manager, Sponsor, and Stakeholders will establish and approve documentation for measuring project scope which includes deliverable quality checklists and work performance measurements.

Proposed scope changes may be initiated by the Project Manager, Stakeholders or any member of the project team. All change requests will be submitted to the Project Manager who will then evaluate the requested scope change. Upon acceptance of the scope change request the Project Manager will submit the scope change request to the Change Control Board and Project Sponsor for acceptance. Upon approval of scope changes by the Change Control Board and Project Sponsor the Project Manager will update all project documents and communicate the scope change to all stakeholders. Based on feedback and input from the Project Manager and Stakeholders, the Project Sponsor is responsible for the acceptance of the final project deliverables and project scope.

The Project Sponsor is responsible for formally accepting the project's final deliverable. This acceptance will be based on a review of all project documentation, testing results, beta trial results, and completion of all tasks/work packages and product functionality.

SCHEDULE MANAGEMENT PLAN

Project schedules for the new high speed slitter Project will be created using MS Project 2010 starting with the deliverables identified in the project's Work Breakdown Structure (WBS). Activity definition will identify the specific work packages which must be performed to complete each deliverable. Activity sequencing will be used to determine the order of work packages and assign relationships between project activities. Activity

duration estimating will be used to calculate the number of work periods required to complete work packages. Resource estimating will be used to assign resources to work packages in order to complete schedule development.

Once a preliminary schedule has been developed, it will be reviewed by the project team and any resources tentatively assigned to project tasks. The project team and resources must agree to the proposed work package assignments, durations, and schedule. Once this is achieved the project sponsor will review and approve the schedule and it will then be base lined.

In accordance with Rolling Mill organizational standard, the following will be designated as milestones for all project schedules:

- Completion of scope statement and WBS/WBS Dictionary
- Base lined project schedule
- Approval of final project budget
- Project kick-off
- Approval of roles and responsibilities
- Requirements definition approval
- Completion of data mapping/inventory
- Project implementation
- Acceptance of final deliverables

Roles and responsibilities for schedule development are as follows:

The project manager will be responsible for facilitating work package definition, sequencing, and estimating duration and resources with the project team. The project manager will also create the project schedule using MS Project 2010 and validate the schedule with the project team, stakeholders, and the project sponsor. The project manager will obtain schedule approval from the project sponsor and baseline the schedule.

The project team is responsible for participating in work package definition, sequencing, duration, and resource estimating. The project team will also review and validate the proposed schedule and perform assigned activities once the schedule is approved.

The project sponsor will participate in reviews of the proposed schedule and approve the final schedule before it is base lined.

The project stakeholders will participate in reviews of the proposed schedule and assist in its validation.

QUALITY MANAGEMENT PLAN

All members of the new high speed slitter project team will play a role in quality management. It is imperative that the team ensures that work is completed at an adequate level of quality from individual work packages to the final project deliverable. The following are the quality roles and responsibilities for the new high speed slitter Project:

The Project Sponsor is responsible for approving all quality standards for the new high speed slitter Project. The Project Sponsor will review all project tasks and deliverables to ensure compliance with established and approved quality standards. Additionally, the Project Sponsor will sign off on the final acceptance of the project deliverable.

The Project Manager is responsible for quality management throughout the duration of the project. The Project Manager is responsible for implementing the Quality Management Plan and ensuring all tasks, processes, and documentation are compliant with the plan. The Project Manager will work with the project's quality specialists to establish acceptable quality standards. The Project Manager is also responsible for communicating and tracking all quality standards to the project team and stakeholders.

The Quality Specialists are responsible for working with the Project Manager to develop and implement the Quality Management Plan. Quality Specialists will recommend tools

and methodologies for tracking quality and standards to establish acceptable quality levels. The Quality Specialists will create and maintain Quality Control and Assurance Logs throughout the project.

The remaining member of the project team, as well as the stakeholders will be responsible for assisting the Project Manager and Quality Specialists in the establishment of acceptable quality standards. They will also work to ensure that all quality standards are met and communicate any concerns regarding quality to the Project Manager.

Quality control for the new high speed slitter Project will utilize tools and methodologies for ensuring that all project deliverables comply with approved quality standards. To meet deliverable requirements and expectations, we must implement a formal process in which quality standards are measured and accepted. The Project Manager will ensure all quality standards and quality control activities are met throughout the project. The Quality Specialists will assist the Project Manager in verifying that all quality standards are met for each deliverable. If any changes are proposed and approved by the Project Sponsor and CCB, the Project Manager is responsible for communicating the changes to the project team and updating all project plans and documentation.

Quality assurance for the new high speed slitter Project will ensure that all processes used in the completion of the project meet acceptable quality standards. These process standards are in place to maximize project efficiency and minimize waste. For each process used throughout the project, the Project Manager will track and measure quality against the approved standards with the assistance of the Quality Specialists and ensure all quality standards are met. If any changes are proposed and approved by the Project Sponsor and CCB, the Project Manager is responsible for communicating the changes to the project team and updating all project plans and documentation.

RISK MANAGEMENT PLAN

The approach for managing risks for the new high speed slitter Project includes a methodical process by which the project team identifies, scores, and ranks the various risks. Every effort will be made to proactively identify risks ahead of time in order to implement a mitigation strategy from the project's onset. The most likely and highest impact risks were added to the project schedule to ensure that the assigned risk managers take the necessary steps to implement the mitigation response at the appropriate time during the schedule. Risk managers will provide status updates on their assigned risks in the bi-weekly project team meetings, but only when the meetings include their risk's planned timeframe.

Upon the completion of the project, during the closing process, the project manager will analyze each risk as well as the risk management process. Based on this analysis, the project manager will identify any improvements that can be made to the risk management process for future projects. These improvements will be captured as part of the lessons learned knowledge base.

RISK REGISTER

The Risk Register for this project is provided in Appendix B, Risk Register.

STAFFING MANAGEMENT PLAN

The new high speed slitter Project will consist of a matrix structure with support from various internal organizations. Staffing requirements for the new high speed slitter Project include the following:

Project Manager (1 position) – responsible for all management for the new high speed slitter Project. The Project Manager is responsible for planning, creating, and/or

managing all work activities, variances, tracking, reporting, communication, performance evaluations, staffing, and internal coordination with functional managers.

Mechanical Project Engineer (1 position) – responsible for oversight of all activities and Mechanical tasks for the new high speed slitter Project as well as ensuring functionality is compliant with quality standards. Responsible for working with the Project Manager to create work packages, manage risk, manage schedule, identify requirements, and create reports. The Mechanical Project Engineer will be managed by the Project Manager who will provide performance feedback to the functional manager.

Electrical Project Engineer (1 position) – responsible for oversight of all Electrical activities for the new high speed slitter Project. All Electrical tasks will be reviewed by the Electrical Project Engineer prior to implementation. Responsibilities also include assisting with risk identification, determining impacts of change requests, and status reporting. The Electrical Project Engineer will be managed by the Project Manager and feedback will be provided to the functional manager for performance evaluations by the Project Manager.

Senior Quality Specialist (1 position) – responsible for assisting the Project Manager in creating quality control and assurance standards. The Senior Quality Specialist is also responsible for maintaining quality control and assurance logs throughout the project. The Senior Quality Specialist will be managed by the Project Manager who will also provide feedback to the functional manager for performance evaluations.

Quality Specialist (1 position) – responsible for assisting the Project Manager and Senior Quality Specialist in creating and tracking quality control and assurance standards. The Quality Specialist will have primary responsibility for compiling quality reporting and metrics for the Project Manager to communicate. The Quality Specialist will be managed by the Project Manager who will provide feedback, along with the Senior Quality Specialist to the functional manager for performance evaluations.

Technical Writer (1 position) – responsible for compiling all project documentation and reporting into organizational formats. Responsible for assisting the Project Manager in Configuration Management and revision control for all project documentation.

Responsible for scribing duties during all project meetings and maintaining all project communication distribution lists. The Technical Writer will be managed by the Project Manager who will also provide feedback to the functional manager for performance evaluations.

Testing Specialist (1 position) – responsible for helping establish testing specifications for the new high speed slitter Project with the assistance of the Project Manager and Programmers. Responsible for ensuring all testing is complete and documented in accordance with TSI standards. Responsible for ensuring all testing resources are coordinated. The Testing Specialist will be managed by the Project Manager who will also provide feedback to the functional manager for performance evaluations.

The Project Manager will negotiate with all necessary TSI functional managers in order to identify and assign resources for the new high speed slitter Project. All resources must be approved by the appropriate functional manager before the resource may begin any project work. The project team will not be co-located for this project and all resources will remain in their current workspace.

RESOURCE CALENDAR

The new high speed slitter Project will require all project team members for the entire duration of the project although levels of effort will vary as the project progresses. The Project is scheduled to last one year with standard 40 hour work weeks. If a project team member is not required for a full 40 hour work week at any point during the project, their efforts outside of the new high speed slitter Project will be at the discretion of their Functional Manager.

COST BASELINE

The cost baseline for the new high speed slitter project includes all budgeted costs for the successful completion of the project.

Project Phase	Budgeted Total
Planning	SAR 1,200,000.00
Design	SAR 5,000,000.00
manufacturing	SAR 30,000,000.00
Construction	SAR 10,875,000.00
Commission	SAR 3,175,000.00
Transition and Closeout	SAR 750,000.00

QUALITY BASELINE

The new high speed slitter Project must meet the quality standards established in the quality baseline. The quality baseline is the baseline which provides the acceptable quality levels of the new high speed slitter Project. The project must meet or exceed the quality baseline values in order to achieve success.

Sr.#	Criteria	Acceptable Level
1	Annual production capacity	150K TPA
2	Speed of slitting line	1000MPM
3	Total calendar hours	8568 Hr.
4	Planned down days	192 Hr.
5	Available run time	6547 Hr.
6	Required run time for 150K TPA	5531 Hr.
7	Throughput/Hour	36.15 T/Hr

REFERENCES

- Construction Project Management: A Complete Introduction by Alison Dykstra
- Project management: a systems approach to planning, scheduling, and controlling by Kerzner, H.

APPENDIX B: Risk Register

Node		Source of Risk	Category	Causes	Probability		Impact / Consequences		Safeguards	Severity	Response plan	Responsibility	Impact cost (SAR)	EMV (SAR)
1	Preparation Station - HSS	ASRS Coil Car Failure	Financial	Mechanical Failure	B	0.04	1	Coil loading stop	PM Check	Medium	Implement the New Design Change by Vendor	Maintenance Department	SAR 265,000	SAR 10,600
			Financial	Electrical Failure	E	0.01	1	Coil loading stop	PM Check	Low		Maintenance Department	SAR 1,000	SAR 10
		CPS Entry coil Car Failure	Financial	Mechanical Failure	E	0.01	1	Coil loading stop	PM Check	Low		Maintenance Department	SAR 1,000	SAR 10
			Financial	Electrical Failure	E	0.01	1	Coil loading stop	PM Check	Low		Maintenance Department	SAR 1,000	SAR 10
		DeCoiler Failure	Financial	Mechanical Failure	D	0.02	1	Coil loading stop	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
			Financial	Electrical Failure	E	0.01	1	Coil loading stop	PM Check	Low		Maintenance	SAR 1,000	SAR 10

										Depart ment			
	Impro per Coil Handli ng	Health and Safety	Huma n Error	D	0. 02	1	Injury	PPE, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 2,600	SAR 52
	Heat Stress	Health and Safety	High Tempe rature and humidi ty	C	0. 03	1	Heat Relate d Injury	Heat Stress preve nition Plan	Me diu m	Provid e the Pull pit for the field Operat or	Engine ring Depart ment	SAR 50,000	SAR 1,500
	Impro per Scrap Coil Handli ng	Health and Safety	Huma n Error	D	0. 02	1	Injury	PPE, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
	Portal Crane Failur e	Finan cial	Break Failure	D	0. 02	1	Asset Dama ge	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
		Finan cial	Wire Rope Dama ge	D	0. 02	1	Asset Dama ge	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
		Finan cial	Positio ning Error	A	0. 05	1	Produ ction Loss	PM Check	Me diu m	Explor e the possibi lity of upgrad	Engine ring Depart ment	SAR 100,000	SAR 5,000

									e the Syste m			
Scrap Coil Car Failur e	Finan cial	Mecha nical Failure	E	0. 01	1	Scrap Coil loadin g stop	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 10
	Finan cial	Electri cal Cable Failure	C	0. 03	1	Scrap Coil loadin g stop	PM Check	Me diu m	Explor e the possibi lity of Other engine ering control to avoid the Cable Damag e	Engine ering Depart ment	SAR 186,000	SAR 5,580
ASRS Crane Failur e	Finan cial	Positio ning Error	C	0. 03	1	Asset Dama ge	No Contr ol Meas ure	Me diu m	Establi sh PM check	Mainte nance Depart ment	SAR 342,000	SAR 10,260
	Finan cial		C	0. 06	2	Produ ction Loss	No Contr ol Meas ure	Me diu m	Establi sh PM check	Mainte nance Depart ment	SAR 257,000	SAR 15,420

2	Coil Transfer from Pre-Station to OMEGA Car - HSS	OMEGA Car Failure	Financial	Mechanical failure	D	0.02	1	Coil loading stop	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
			Financial	Electrical Failure	D	0.02	1	Coil loading stop	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
3	Coil Transfer from OMEGA to HSS	Coil Car Failure	Financial	Mechanical failure	C	0.03	1	Coil loading stop	PM Check	Medium	SWI for Maintenance need to be developed for OMEGA & Coil Car for Both HSS & PTS (Wheel & Shaft Replacement)	Maintenance Department	SAR 62,000	SAR 1,860

			Financial	Electrical Failure	C	0.03	1	Coil loading stop	PM Check	Medium	SWI for Maintenance need to be developed for OMEGA & Coil Car for Both HSS & PTS (Wheel & Shaft Replacement)	Maintenance Department	SAR 62,000	SAR 1,860
4	Coil Loading to De-Coiler-HSS	Coil Car Failure	Financial	Mechanical failure	C	0.03	1	Coil loading stop	PM Check	Medium	SWI for Maintenance need to be developed for Coil Car (Bearing & Shaft	Maintenance Department	SAR 62,000	SAR 1,860

										Replac ement)			
		Finan cial	Electri cal Failure	C	0. 03	1	Coil loadin g stop	PM Check	Me diu m	SWI for Mainte nance need to be develo p for Coil Car (Bearin g & Shaft Replac ement)	Mainte nance Depart ment	SAR 62,000	SAR 1,860
	De Coiler Mandr el Failur e	Finan cial	Mecha nical Failure	B	0. 04	1	Coil loadin g stop	PM Check	Me diu m	Imple ment the New Design Chang e by Vendor	Mainte nance Depart ment	SAR 265,000	SAR 10,600
		Finan cial		B	0. 08	2	Coil Unloa ding Stop	PM Check	Me diu m	Imple ment the New Design Chang e by Vendor	Mainte nance Depart ment	SAR 265,000	SAR 21,200

			Financial		B	0.12	3	Asset Damage	PM Check	High	Implement the New Design Change by Vendor	Maintenance Department	SAR 387,000	SAR 46,440
5	Coil Threading to Roller Shear - HSS	Threading Equipment Failure	Financial	Mechanical Failure	C	0.03	1	Production Loss	PM Check	Medium	SWI for Maintenance need to be developed for Belt Replacement	Maintenance Department	SAR 62,000	SAR 1,860
			Financial	Electrical Failure	E	0.01	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 10
		Improper Scrap Handling	Health and Safety	Human Error	D	0.02	1	Injury	PPE, SWI & Training	Low		Maintenance Department	SAR 1,000	SAR 20
6	Coil Threading Roller shear	Coil Stuck at CNC Shear	Financial	Uneven Strip surface	B	0.04	1	Production Loss	No Control Measure	Medium	Develop SWI for the removal	Operation Department	SAR 62,000	SAR 2,480

to Recoiler - HSS	Improper Removing & Handling the Scrap from the line									al of Scrap			
		Health and Safety	Human Error	C	0.03	1	Injury	PPE, SWI & Training	Low		Maintenance Department	SAR 1,000	SAR 30
		Health and Safety	Slip and Trip	C	0.03	1	Injury	PPE, SWI & Training	Medium	Explore the possibility of disposing the Scrap from the platform	Engineering Department	SAR 62,000	SAR 1,860
	Oiler Machine Failure	Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
		Financial	Electrical Failure	C	0.03	1	Production Loss	PM Check	Medium	Implement the high voltage upgrading Project - PO# 63419 05592	Engineering Department	SAR 168,000	SAR 5,040

	Improper Oiling	Financial	High ambient Temperature & high humidity	A	0.05	1	Production Loss	No control Measure	High	Implement the oil auxiliary cooling project under MOC-RM-2020-9600-0270	Central Maintenance Department	SAR 297,600	SAR 14,880
		Image & Reputation		A	0.1	2	Customer Complaint	No control Measure	High	Implement the oil auxiliary cooling project under MOC-RM-2020-9600-0270	Central Maintenance Department	SAR 297,600	SAR 29,760
	CNC side Trimmer failure	Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
		Financial	Electrical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance	SAR 1,000	SAR 20

										Depart ment			
	Impro per CNC side Trim mer Cuttin g	Finan cial	Knife Wear & tear issue	C	0. 03	1	Produ ction Loss	Knife replac ement & calibr ation, SWI	Low		Mainte nance Depart ment	SAR 1,000	SAR 30
	Impro per CNC Side Timm er knife replac ement & calibra tion	Health and Safety	Huma n Error	D	0. 02	1	Injury	PPE, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
	Re- Coiler Failur e	Finan cial	Mecha nical (Mand rel, Hydra ulic leakag e, counte r bearin	C	0. 03	1	Produ ction Loss	PM Check	Me diu m	PM Freque ncy need to be improv e	Mainte nance Depart ment	SAR 20,000	SAR 600

			g) Failure										
		Finan cial	Electri cal Failure	D	0.02	1	Produ ction Loss	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
	Mandr el Chang e Seque nce Failur e	Finan cial	Mecha nical Failure	D	0.02	1	Asset Dama ge	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
		Finan cial		D	0.04	2	Produ ction Loss	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 40
		Finan cial	Electri cal Failure	C	0.03	1	Asset Dama ge	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 30
		Finan cial		D	0.04	2	Produ ction Loss	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 40
	Mandr el lifting Hazar d	Finan cial	Huma n Error	D	0.02	1	Asset Dama ge	LSR, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
		Health and Safety		D	0.04	2	Injury	LSR, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 40
	Tapin g Machi	Finan cial	Mecha nical Failure	D	0.02	1	Produ ction Loss	PM Check	Low		Mainte nance	SAR 1,000	SAR 20

		ne Failure								Department		
		Financial	Electrical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Electrical Failure	D	0.02	1	Production Loss	PM check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Malfunction of Exit Guide Unit	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Electrical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20
		Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low	Maintenance Department	SAR 1,000	SAR 20

		Failure	Financial	Electrical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
		Strip Break	Financial	Input Material defect	C	0.03	1	Production Loss	No Control Measure	Medium	Input Material Quality to be improve from TCM side	Operation Department	SAR 12,000	SAR 360
			Financial	Mechanical Failure	D	0.02	1	Production Loss	No Control Measure	Low		Maintenance Department	SAR 1,000	SAR 20
			Financial	Electrical Failure	D	0.02	1	Production Loss	No Control Measure	Low		Maintenance Department	SAR 1,000	SAR 20
		Removal of Strip Break material	Health and Safety	Human Error	D	0.02	1	Injury	SWI, PPE & training	Low		Maintenance Department	SAR 1,000	SAR 20
		Scrap Baller Failure	Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20

			Finan cial	Electri cal Failure	D	0. 02	1	Produ ction Loss	PM Check	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
		Scrap Baller Overfl ow	Finan cial	Scrap Accum ulation	C	0. 03	1	Produ ction Loss	No Contr ol Meas ure	Me diu m	Compl ete the on going study to preven t the Scrap accum ulation	Engine ering Depart ment	SAR 279,000	SAR 8,370
		Sampl e Cuttin g & Handli ng Hazar d	Health and Safety	Huma n Error	C	0. 03	1	Injury	PPE, SWI & Traini ng	Me diu m	Increa se aware ness & trainin g for all operati on & QC staff	Operat ion Depart ment	SAR 279,000	SAR 8,370
		Impro per Handli ng of Scrap	Health and Safety	Huma n Error	D	0. 02	1	Injury	SWI, PPE & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20

			Health and Safety	Same Level Fall & Trip	D	0.02	1	Injury	SWI, PPE & Training	Low		Maintenance Department	SAR 1,000	SAR 20
		Heat Stress	Health and Safety	High Ambient Temperature & High Humidity	D	0.02	1	Heat Related illness	Heat Prevention Plan	Low		Maintenance Department	SAR 1,000	SAR 20
		Improper Scrap Bin Changing	Financial	Human Error	C	0.03	1	Asset Damage	SWI, Training	Low		Maintenance Department	SAR 1,000	SAR 30
		Steel Spool Unloading	Financial	Mechanical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
		portal Crane failure	Financial	Electrical Failure	D	0.02	1	Production Loss	PM Check	Low		Maintenance Department	SAR 1,000	SAR 20
		Maintenance Hazards	Health and Safety	Oil Leakage from Hydraulic system	C	0.03	1	Injury	PPE	Medium	SWI for Maintenance need to develop	Maintenance Department	SAR 40,000	SAR 1,200

										mainte nance activity under pit with precau tion				
										Explor e the possibi lity of have potabl e pump to collect oil from the pit	Mainte nance Depart ment			
7	Scrap & Rework Coil Handl ing - HSS	Improp er Handl ing of Rework & Scrap Coil	Health and Safety	Huma n Error	D	0. 02	1	Injury	SWI,P PE & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
			Finan cial		D	0. 04	2	Asset Dama ge	SWI,P PE & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 40
8	Aero Shaft Handl	Improp er Aero shaft	Health and Safety	Huma n Error	D	0. 02	1	Injury	PPE, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20

	ing - HSS	Handli ng	Finan cial		C	0.06	2	Asset Dama ge	PPE, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 60
9	Asse mblin g of HSS Knife & Rubb er rings for Grindi ng	Impro per Handli ng of Knife & Rubbe r ring	Health and Safety	Huma n Error	D	0.02	1	Injury	PPE, SWI & Traini ng	Low		Mainte nance Depart ment	SAR 1,000	SAR 20
													SAR 4,037,800	SAR 212,392