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Prepare Project Schedule using Microsoft Project

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A B S T R A C T

Project Scheduling is important since it plays an effective role in project success. To organize and complete your projects in a timely, quality and financially responsible manner, you need to schedule projects carefully. Effective project scheduling plays a crucial role in ensuring project success. Scheduling is used to keep projects on track, set realistic time frames, assign resources appropriately and manage quality to decrease product errors. This typically results in reduced costs and increased customer satisfaction. Improper scheduling leads to delay in the project, budget overrun which results in project failure. Hence proper scheduling is important. In this project the detailed project schedule is prepared using Microsoft Project Software. MS Project is used for scheduling as it provides tools that are simple for anyone to use, flexible for any project type, powerful for initiatives of any size, and transparent for visibility across the organization. The software offers a simple and intuitive interface where users can switch between grids, boards, or Gantt charts to track progress. This document gives detailed information about how to prepare schedule in MS Project. In this study, scheduling of fabrication project has been done to display how can we prepare a schedule using MS Project.

Keywords:MS Project, Scheduling, Planning, Resource Optimization, Resource Levelling.

1. Introduction

A project is defined as a sequence of tasks that must be completed to attain a certain outcome. The term Project refers to any temporary endeavor with a definite beginning and end. Depending on its complexity, it can be managed by a single person or hundreds. A project is a set of interdependent tasks that have a common goal. Projects have the following characteristics:

1. A clear start and end date – There are projects that last several years but a project cannot go on forever. It needs to have a clear beginning, a definite end, and an overview of what happens in between.
2. A project creates something new – Every project is unique, producing something that did not previously exist. A project is a one-time, once-off activity, never to be repeated exactly the same way again.
3. A project has boundaries – A project operates within certain constraints of time, money, quality, and functionality. We'll see more about this in later sections.
4. A project is not business as usual – Projects are often confused with processes. A Process is a series of routine, predefined steps to perform a particular function, say, expense reimbursement approvals. It's not a one-off activity. It determines how a specific function is performed every single time.

Every project operates within certain boundaries called constraints:

- Project scope
- Project schedule
- People
- Resources

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All of these project constraints depend on what the project aims to achieve and when. The outcome of a project results in deliverables. Anything that's produced during the project's development such as documents, plans, and reports are considered a deliverable. A deliverable may also be the result of the project itself.

Project management, according to the Guide to the Project Management Body of Knowledge (PMBOK Guide), is the application of skills, tools, and techniques to project activities in order to meet project requirements. It is the act of managing all aspects of a project, from team to tasks to tools. This is why project management is important without it, you're relegating your project to chance or chaos, neither of which is ideal. But when you engage in it, there are specific processes and practices that must take place in order for it to be successful.

Why is project management so important.Because nothing ever gets done without first building a project plan, and no project plan gets executed without the proper environment or the proper processes. Project management is the action that helps create and execute that project plan. It applies managerial and interpersonal skills to the process of successfully bringing a project from conception to completion, according to stated requirements.

Fabrication projects pass through different phases much like any typical project including initiation, planning, procurement, execution, contol and close out. Any phase of those can be impacted by different factors, which can affect the whole project cycle. Main factors that cause schedule delays are changes in scope, the poor procurement process, lack of qualified laborers, poor planning and scheduling, inexperienced contractors, and bad performance by the subcontractors. Hence Project scheduling is just as important as cost budgeting as it determines the timeline, resources needed, and reality of the delivery of the project. We require a certain method to avoid delays in project to prepare schedule. MS Project software takes a step further than traditional measurement like PERT to offer quantitative parameter which will allow the project manager to create better and effectively decision for the performance of the project. Also complete the project in given time frame and approved budget.

The introduction should be typed in Times New with font size 10. In this section highlight the importance of topic, making general statements about the topic and Presenting an overview on current research on the subject. The simplest way is to replace(copy-paste) the content with your own material. Your introduction should clearly identify the subject area of interest.

2. Objectives of Study

Following are the objectives of the study:

- The main objective of this study is to understand how to prepare project schedule using MS Project software.
- To perform resource levelling for optimization of resources
- To understand basic concepts of project scheduling and how to control schedule.

3. Project Management

1. Project planning

Project planning is at the heart of the project life cycle, and tells everyone involved where you're going and how you're going to get there. The planning phase is when the project plans are documented, the project deliverables and requirements are defined, and the project schedule is created. It involves creating a set of plans to help guide your team through the implementation and closure phases of the project. The plans created during this phase will help you manage time, cost, quality, changes, risk, and related issues. They will also help you control staff and external suppliers to ensure that you deliver the project on time, within budget, and within schedule.The project planning phase is often the most challenging phase for a project manager, as you need to make an educated guess about the staff, resources, and equipment needed to complete your project. You may also need to plan your communications and procurement activities, as well as contract any third-party suppliers.

The purpose of the project planning phase is to:

- Establish business requirements
- Establish cost, schedule, list of deliverables, and delivery dates
- Establish resources plans
- Obtain management approval and proceed to the next phase

2. Project Scheduling

Scheduling is the determination of the timing of activities and follows logically from the planning process. Scheduling in project management is the listing of activities, deliverables, and milestones within a project. A schedule also usually includes a planned start and finish date, duration, and resources assigned to each activity. Effective project scheduling is a critical component of successful time management.

The purpose of Project scheduling is to:

- Assists with tracking, reporting, and communicating progress
- Ensures everyone is on the same page with tasks, dependencies, and deadlines
- Highlights issues and concerns, such as a lack of resources
- Identifies task relationships
- Monitors progress and identify issues early

3. How is project scheduling different from planning Quite often, these two terms are used interchangeably but they have different roles in the successful completion of a project. On a higher level, the project plan is the master blueprint while the project schedule details the specific tasks.

- Planning primarily involves selecting the appropriate policies, project methodologies, and procedures required to deliver the project on time.

• Scheduling, on the other hand, converts the plans, scope, and cost into an operational timeline.

4. Why we create a project schedule

Project scheduling is important since it plays an effective role in project success. The following are some of the advantages if you properly create your project schedule.

• Project scheduling, when done well, makes the entire project run more smoothly.

• Committing to the project scheduling process at the beginning of your project will give you a clear picture of the requirements set before you.

• It also gives you the chance to catch issues early and alert clients if a timeline isn't feasible. Besides being good for you as the project manager, project scheduling is good for team management.

• Everyone knows what to expect and when. Everyone is being held accountable for the same due dates.

• Other managers can allocate resources efficiently for your project, and they'll be able to anticipate when resources will be available for other projects.

5. Resource Optimization

The resource optimization techniques are tools that are used to adjust the implementation and completion dates of project activities to adjust the planned resource used and the resource availability. It is a tool used in the Schedule Network Analysis to calculate the schedule compression of the project. There are basically two types of tools used by the resource optimization techniques as follows:

• Resource leveling: This technique adjusts the start to finish dates based on the constraints of the resources. It has a goal of balancing the demand for the resources using whatever supply available. It is used when required resources are available at certain limited times and quantities or when over-allocated. It is also used when the resource is assigned to two or more activities during the same period or if the resource usage needs to be kept at a constant level. Resource leveling often causes the critical path to change.

• Resource smoothing: It is a technique used to adjust the activities of the schedule model. It ensures that the requirements for the allocated resource on the project do not go beyond or exceed the pre-defined resource limits. Thus, the project's critical path remains the same thus the completion date may not be delayed.

4. Microsoft Project

Microsoft Project is a project management software product, developed and sold by Microsoft. It is designed to assist a project manager in developing a schedule, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads. Microsoft Project was the company's third Microsoft Windows-based application. Within a few years after its launch, it became the dominant PC-based project management software.

It is part of the Microsoft Office family but has never been included in any of the Office suites. It is available currently in two editions, Standard and Professional. Microsoft Project's proprietary file format is .mpp

• The Advantages of Microsoft Project

a. Integration: Project integrates with the ubiquitous Microsoft 365 Office suite. The project management software also works seamlessly with Microsoft Teams, Skype, Power BI, and Sharepoint with easier integration to Azure and other Microsoft platforms.

b. Dependability: Microsoft Project software is a pioneer among project management tools. Commercially released in 1984, it is a stable software that continually gets enhanced for more relevant features that suit the needs of its users.

c. Customer support: Microsoft as a reputable software company provides reliable support to its users. Partners, consultants, and third party support services are available for this software.

d. Flexibility: Microsoft Project management software is flexible enough for other purposes such as a road mapping tool or for financial management. The deployment options as on-premise or cloud-based solution also provides teams and companies more choices to fit particular user requirements.

• The Disadvantages of Microsoft Projet

a. Requires training : Project has become more intuitive over the years but it can still be overwhelming to new users. When people are thrust into project management jobs out of necessity, Microsoft Project software will require new users to spend time training to avoid getting lost in the details and miss the big picture goals.

b. Cost constraints : Microsoft Project management software is available as an on-premise or cloud-based solution. It can be prohibitive for smaller businesses to purchase many licenses for an on-premise solution, which then can interfere with the team's capability to collaborate amongst themselves. Sharing of information and updates in real-time with clients and stakeholders will be an issue, too. In comparison, the cloud-based versions are not exact products of the on-premise software, which can result in compatibility issues.

c. File compatibility issues : Microsoft Project saves files in a proprietary format, so PCs that do not use the same program cannot open them. When project managers need to send files to clients and other stakeholders, they have to check if the recipient can open the files with a compatible program or perform an extra step of creating compatible formats or printouts.

d. Poor progress visualization : Many people have complained about how time-consuming and difficult it can be to create reports. The lack of real-time dashboard updates contributes to this as well. It is infinitely more difficult to stay on top of the plan without real-time information.

5. Methodology

The methodology of the project is divided into 3 parts. The First part is to prepare a process plan. In this process plan work breakdown structure is prepared, i.e. how your project will go, after one activity which is the next activity to be performed. And the scope of the project is defined. Before we develop a schedule it is very important to have a proper detailed scope of the project. Second step is to develop the schedule of the project. Here

activities of a project, duration, logical relationship, different constraints, project calenders was defined. Based on that we prepared a project schedule. Third part is resource optimization. In that resources were allocated to each task and resource levelling is done for over-allocated resources.

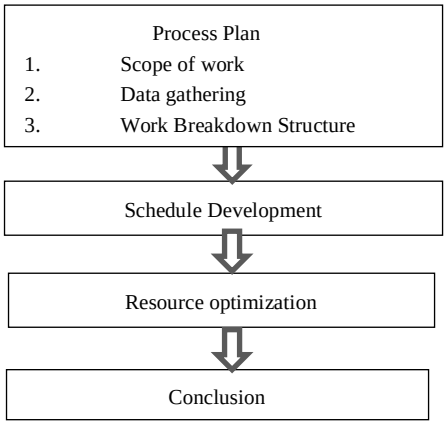


Fig. 1: Methodology of work

A. Process Plan

Here the Process plan is a preparatory step before starting any project which determines the sequence of activities or processes needed to complete the project.

1. Scope of work

With a definite project scope, managers can easily stay on track and ensure that all the deadlines are being followed throughout the project life cycle.

1.1 Important of clear project scope

A well- defined project scope management helps avoid common issues like constantly changing requirements, pivoting project direction when project is already mid-way. The scope of the project is the most important part because it lays out the foundation for the future of the project. If the scope of work is not clear and detailed the likelihood of failure may occur.

2. Data gathering

Available data related to project. This involves collection of structural, plumbing, Auto Cad drawings.

3. Work Breakdown Structure

Work breakdown structure (WBS) is a method for completing a complex, multi-step project. It's a way to divide and conquer large projects to get things done faster and more efficiently. The goal of a WBS is to make a large project more manageable. Breaking it down into smaller chunks means work can be done simultaneously by different team members, leading to better team productivity and easier project management. In WBS the list of the activities and their sequence is finalised.

B. Scheduling

Scheduling involved listing of activities, deliverables, and milestones, planned start and finish date, duration, and resources assigned to each activity. Effective project scheduling is a critical component of successful time management. The next step is to develop schedule in MS Project software. The flow diagram of preparing schedule obtained below.

1.	Create a new blank project
2.	Add project information
3.	Add task name
4.	Enter task duration
5.	Create milestone
6.	Linking task
7.	Prepare Resource sheet
8.	Assign resources to task

Fig. 2: Scheduling Process

1. Create a new blank project

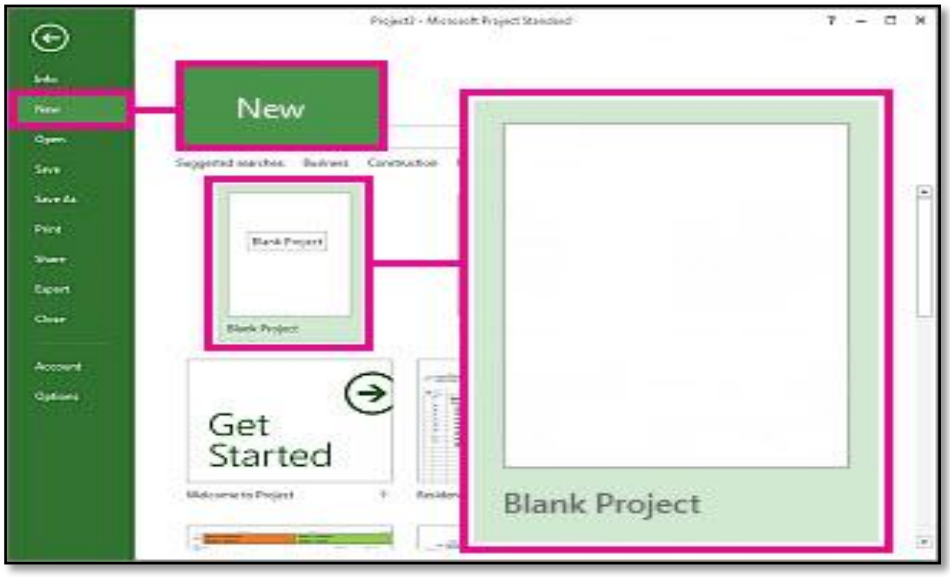


Fig. 3: Create new project

MS Project 2013 will display a list of options. In the list of available templates, click Blank Project

2. Add project information

In this we changed the project start date and add some more information.

Step 1: Start Date

Click Project tab → Properties Group → Project Information.

A dialog box appears. In the start date box, type start date or click the down arrow to display the calendar, select date. Click OK to accept the start date.

Step 2: Set Up Calendar

Click Project tab → Properties Group → Project Information.

Click the arrow on the Current Date dropdown box. A list appears containing three base calendars.

1) **24 Hour** − A calendar with no non-working time.
2) **Night Shift** − Covers 11 PM to 8 AM, night shifts covering all nights from Monday to Friday, with one hour breaks.
3) **Standard** − Regular working hours, Monday to Friday between 8 AM to 5 PM, with one hour breaks.

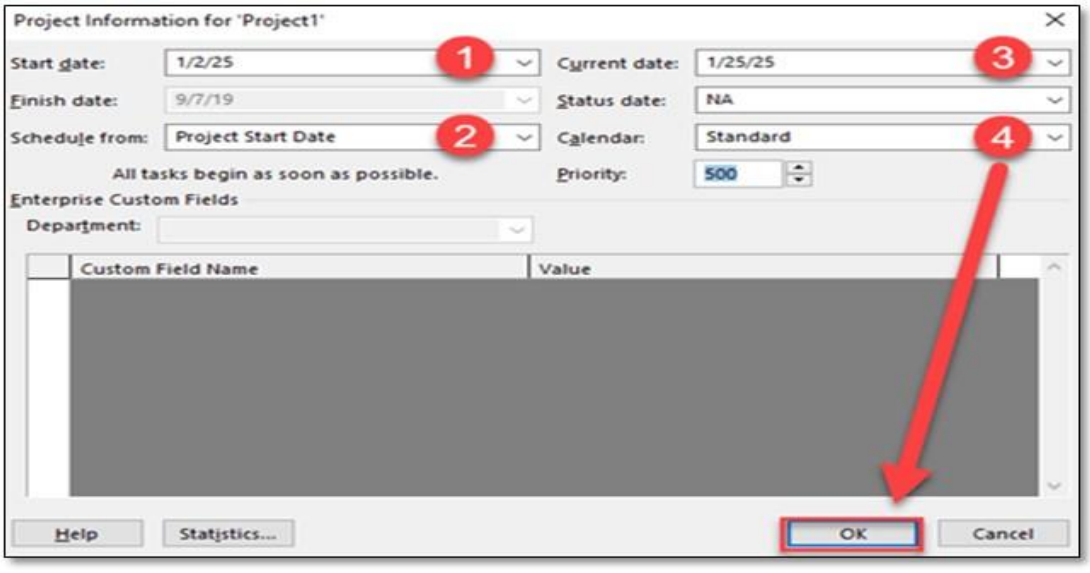


Fig. 4: Project Information

Select a Standard Calendar as your project Calendar. Click “Cancel” or “OK” to close the dialog box.

2.1 Adding exceptions to calendar

Exceptions are used to modify a Project calendar to have a non-standard workday or a non-working day. You can also allot unique working hours for a particular resource as well.

Click Project tab → Properties Group → Change Working Time.

Fig. 5: Exceptions in Project Calendar

2.2 Create Non-working Days

Click Project tab → Properties group → Click Change Working Time.

The Change Working Time dialog box appears. Click the down arrow for the "For Calendar" dropdown box.Select the resource for whom you want to change work schedule. We have chosen John again. Click "Work Weeks" tab. Double-click the [default] cell below the Name column heading. Under "Selected Day(s)" choose any day you want to change the work schedule. Click any day (we have chosen Friday) and use the radio button "Set days to nonworking time". Click OK to close the Dialog box. You will now see all Fridays are greyed out in the calender.

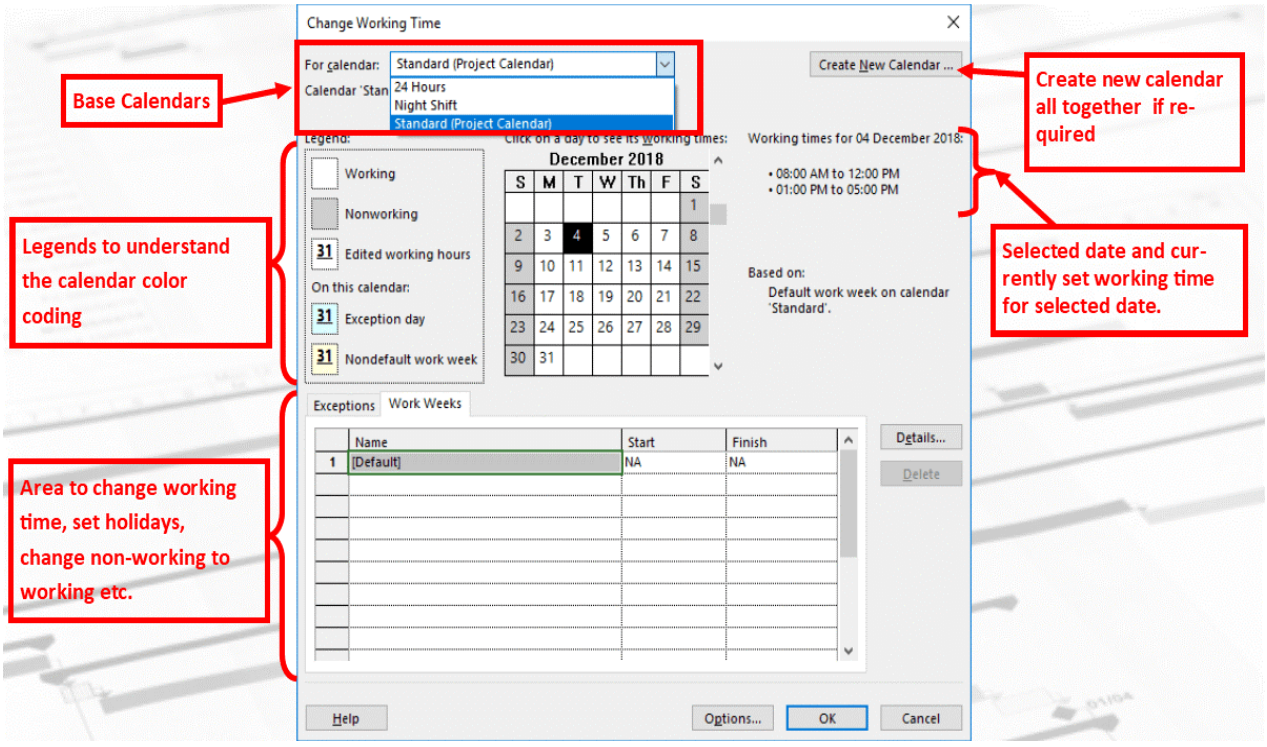


Fig. 6: Project Calendar

3. Build Task List

We prepared a Work Breakdown Structure (WBS). In context of WBS, "Work" refers to "Deliverables" and not effort.WBS identifies the deliverable at the lowest level as work package. This work package is decomposed into smaller tasks/activities, which is the effort necessary to complete the work package. So a task is action-oriented, and the work package is the deliverable or a result of one or more tasks being performed. There is a significant amount of confusion between what constitutes an activity and what constitutes a task within the

project management community. But for MS Project, a task is the effort and action required to produce a particular project deliverable. MS Project does not use the term "activity".

3.1 Add task name

In Gantt Chart View, just click a cell directly below the Task Name column. Enter the task name.

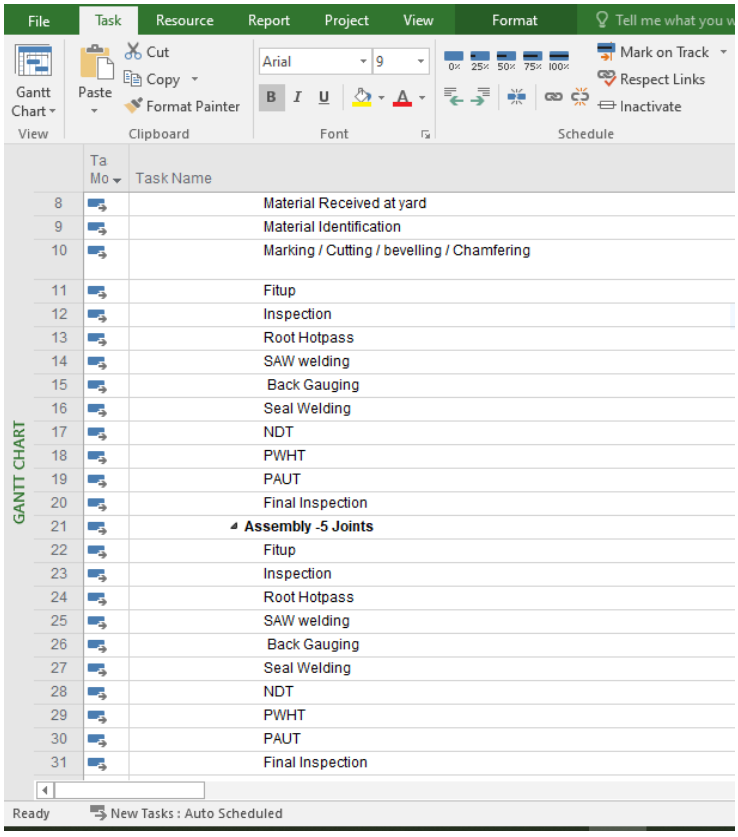


Fig. 7: Add Task Name

4. Duration format

A duration of the task is the estimated amount of time it will take to complete a task. As a project manager you can estimate a task duration using expert judgment, historical information, analogous estimates or parametric estimates.

You can enter task duration in terms of different dimensional units of time, namely minutes, hours, days, weeks, and months. You can use abbreviations for simplicity and ease as shown in the following table.

Table 1. Appearance of Duration

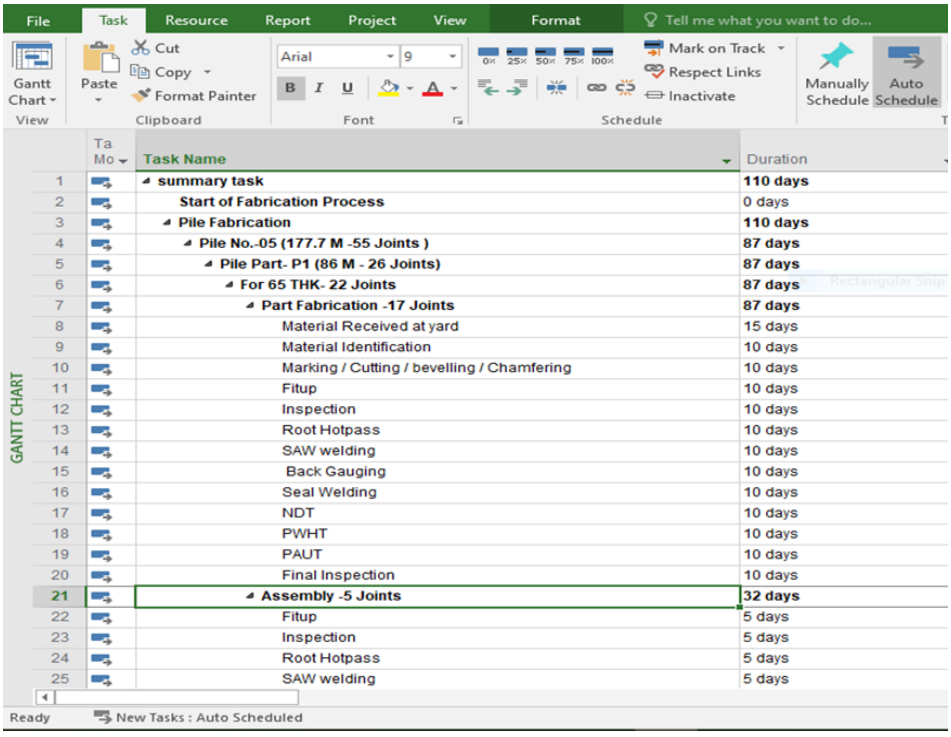
Value you want to enter	Abbreviation	Appearance
50 minutes	50 m	50 mins
3 hours	3 h	3 hrs
2 days	2 d	2 days
4 weeks	4 w	4 weeks
7 months	7 mo	7 months

Table 1. Project Default Value of Duration

Value entered	Value	Project default value
1 minute	60 seconds	60 seconds
1 hour	60 minutes	60 minutes
1 day	24 hours	8 hours (1 workday)
1 week	7 days	40 hours (5 workdays)
1 months	28 to 32 days	160 hours

4.1 Enter task duration

click the cell below Duration column heading. Enter the duration.



	Ta Mo	Task Name	Duration
1		summary task	110 days
2		Start of Fabrication Process	0 days
3		Pile Fabrication	110 days
4		Pile No.-05 (177.7 M -55 Joints)	87 days
5		Pile Part- P1 (86 M - 26 Joints)	87 days
6		For 65 THK- 22 Joints	87 days
7		Part Fabrication -17 Joints	87 days
8		Material Received at yard	15 days
9		Material Identification	10 days
10		Marking / Cutting / bevelling / Chamfering	10 days
11		Fitup	10 days
12		Inspection	10 days
13		Root Hotpass	10 days
14		SAW welding	10 days
15		Back Gauging	10 days
16		Seal Welding	10 days
17		NDT	10 days
18		PWHT	10 days
19		PAUT	10 days
20		Final Inspection	10 days
21		Assembly -5 Joints	32 days
22		Fitup	5 days
23		Inspection	5 days
24		Root Hotpass	5 days
25		SAW welding	5 days

Fig. 8 : Add Task duration

5. Create Milestone

In Project Management, Milestones are specific points in a project timeline. They are used as major progress points to manage project success and stakeholder expectations. They are primarily used for review, inputs and budgets. Mathematically, a milestone is a task of zero duration. And they can be put where there is a logical conclusion of a phase of work, or at deadlines imposed by the project plan. There are two ways you can insert a milestone.

Method 1: Inserting a Milestone

Click name of the Task which you want to insert a Milestone

Click Task tab → Insert group → Click Milestone.

MS Project names the new task as <New Milestone> with zero-day duration.

Click on <New Milestone> to change its name.

Method 2: Converting a Task to a Milestone

Click on any particular task or type in a new task under the Task Name Heading. Under Duration heading type in "0 days ".

6. Linking Task

Once you have a list of tasks ready to accomplish your project objectives, you need to link them with their task relationships called dependencies. In MS Project, the first task is called a predecessor because it precedes tasks that depend on it. The following task is called the successor because it succeeds, or follows tasks on which it is dependent. Any task can be a predecessor for one or more successor tasks. Likewise, any task can be a successor to one or more predecessor tasks.There are only four types of task dependencies.

a. **Finish to Start (FS)** − Finish the first floor before starting to build the second floor. Most used.

b. **Finish to Finish (FF)** − Cooking all dishes for dinner to finish on time.

c. **Start to Start (SS)** − When doing a survey, we would seek survey responses but will also start tabulating the responses. One does not have to finish collecting survey response before starting the tabulation.

d. **Start to Finish (SF)** − Exam preparation will end when exam begins. Least used.

In MS Project you can identify the Task Links −

- **Gantt Chart** − In Gantt Chart and Network Diagram views, task relationships appear as the links connecting tasks.
- **Tables** − In Tables, task ID numbers of predecessor task appear in the predecessor fields of successor tasks.

Method 1

Select the two tasks you want to link. In the following screenshot taken as an example, we have selected names, Task 1 and Task 2.

Click Task tab → Schedule group → Link the Selected Tasks.

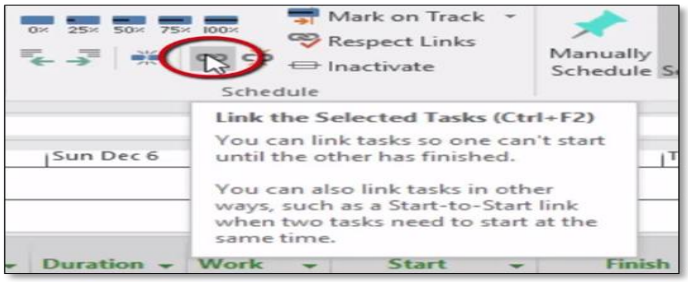


Fig.9: Linking task using method 1

Method 2

Double click a successor task you would like to link and you will see summary task information where you can link tasks.

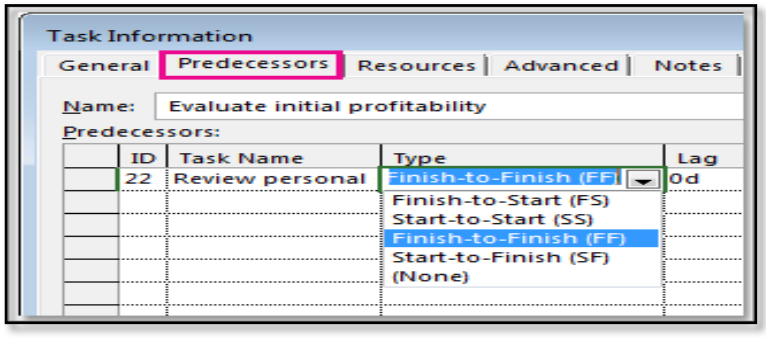


Fig.10: Linking task using method 2

7. Prepare resource sheet

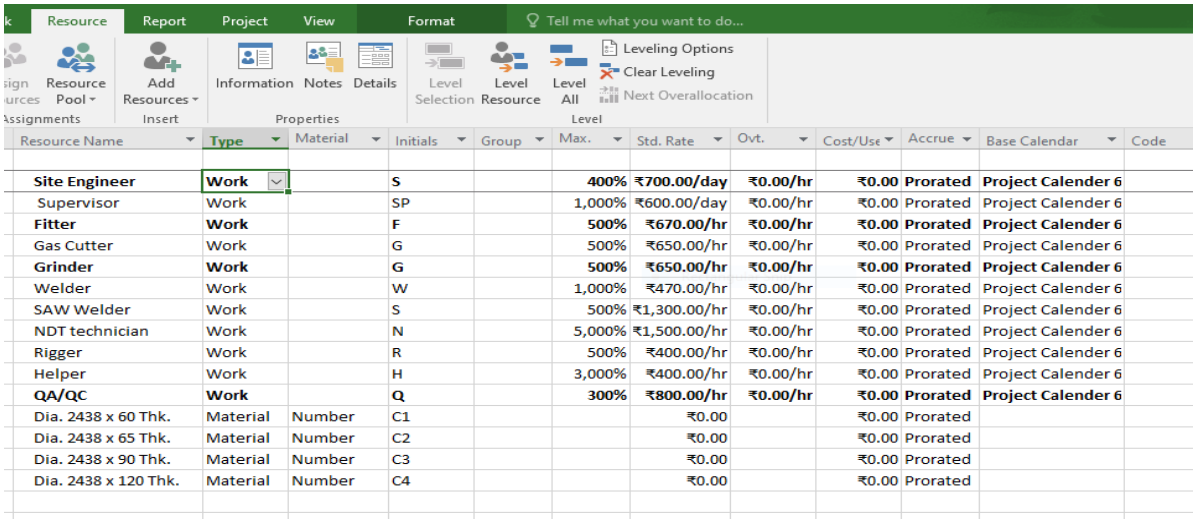
Click team planner → Resource Sheet

In the resource sheet we can add resources required for the project. There are 3 types of resources.

a. **Work resource**: Includes manpower

b. **Material Resource**: Includes materials, machinery

c. **Cost resource**: Includes expenses.



Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt.	Cost/Use	Accrue	Base Calendar	Code
Site Engineer	**Work**		**S**		**400%**	**₹700.00/day**	**₹0.00/hr**	**₹0.00**	**Prorated**	**Project Calender 6**	
Supervisor	Work		SP		1,000%	₹600.00/day	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
Fitter	**Work**		**F**		**500%**	**₹670.00/hr**	**₹0.00/hr**	**₹0.00**	**Prorated**	**Project Calender 6**	
Gas Cutter	Work		G		500%	₹650.00/hr	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
Grinder	**Work**		**G**		**500%**	**₹650.00/hr**	**₹0.00/hr**	**₹0.00**	**Prorated**	**Project Calender 6**	
Welder	Work		W		1,000%	₹470.00/hr	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
SAW Welder	Work		S		500%	₹1,300.00/hr	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
NDT technician	Work		N		5,000%	₹1,500.00/hr	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
Rigger	Work		R		500%	₹400.00/hr	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
Helper	Work		H		3,000%	₹400.00/hr	₹0.00/hr	₹0.00	Prorated	Project Calender 6	
QA/QC	**Work**		**Q**		**300%**	**₹800.00/hr**	**₹0.00/hr**	**₹0.00**	**Prorated**	**Project Calender 6**	
Dia. 2438 x 60 Thk.	Material	Number	C1			₹0.00		₹0.00	Prorated		
Dia. 2438 x 65 Thk.	Material	Number	C2			₹0.00		₹0.00	Prorated		
Dia. 2438 x 90 Thk.	Material	Number	C3			₹0.00		₹0.00	Prorated		
Dia. 2438 x 120 Thk.	Material	Number	C4			₹0.00		₹0.00	Prorated		

Fig.11: Resource Sheet

9. Assign resources to task

In this we assign available resources to tasks. Double click a task you will see summary task information where you can enter resources.

10. Resource levelling

Resource leveling helps managers get maximum use out of the resources available to them. The goal is to minimize waste and resolve conflicts like over-allocation, delays, budget overruns, or the need to add or remove tasks. You can perform it on individual projects or across multiple concurrent projects.

• For individual task resource levelling

Click Resource Tab→ Under level option → Level resource

• For entire project resource levelling

Click Resource Tab→ Under level option → Level All

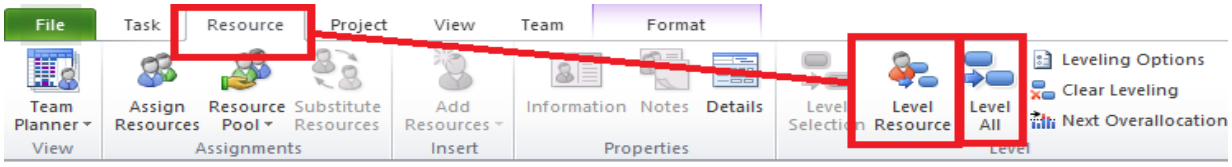


Fig.12: Resource Sheet

6. Result

1. Project Network Diagram

A project network diagram is a visual representation of the workflow of a project. A network diagram is a chart that is populated with boxes noting tasks and responsibilities, and then arrows that map the schedule and the sequence that the work must be completed. Below is the final Project network diagram of this fabrication project.

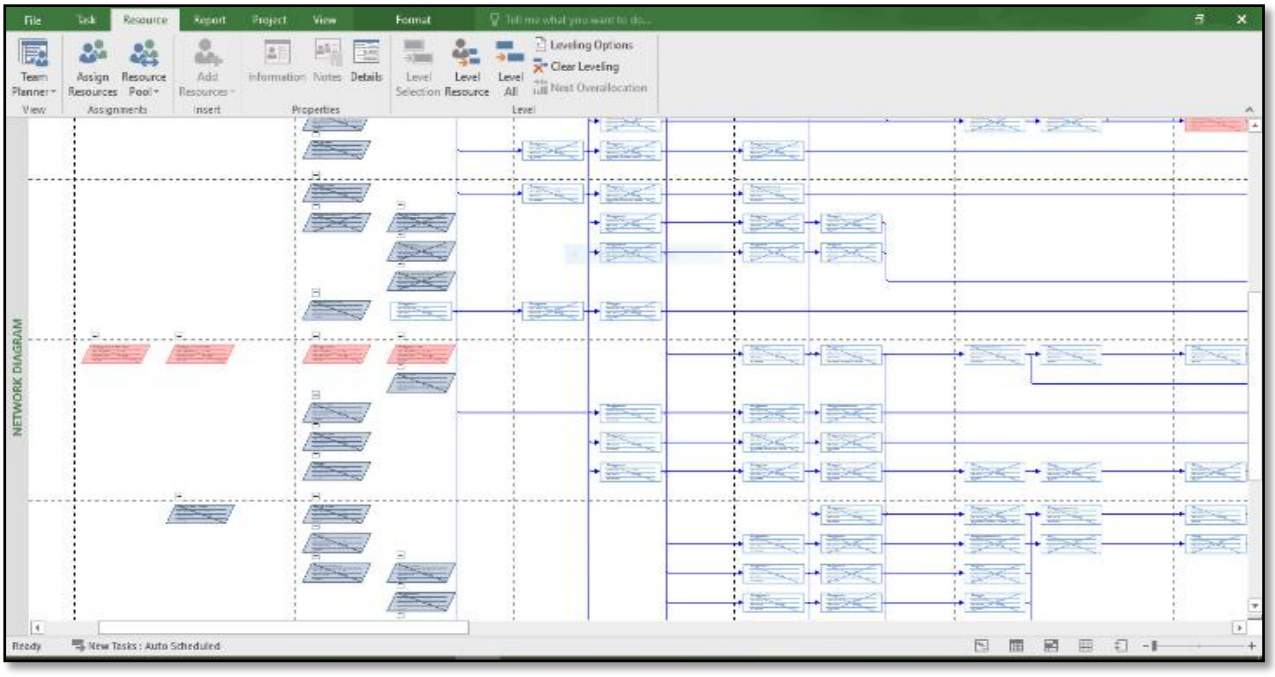


Fig.12: Project Network Diagram

2. Project Gantt Chart

A Gantt chart is a bar chart that provides a visual view of project tasks scheduled over time. A Gantt chart is used for project planning: it's a useful way of showing what work is scheduled to be done on specific days. It helps project managers and team members view the start dates, end dates and milestones of a project schedule in one simple stacked bar chart.

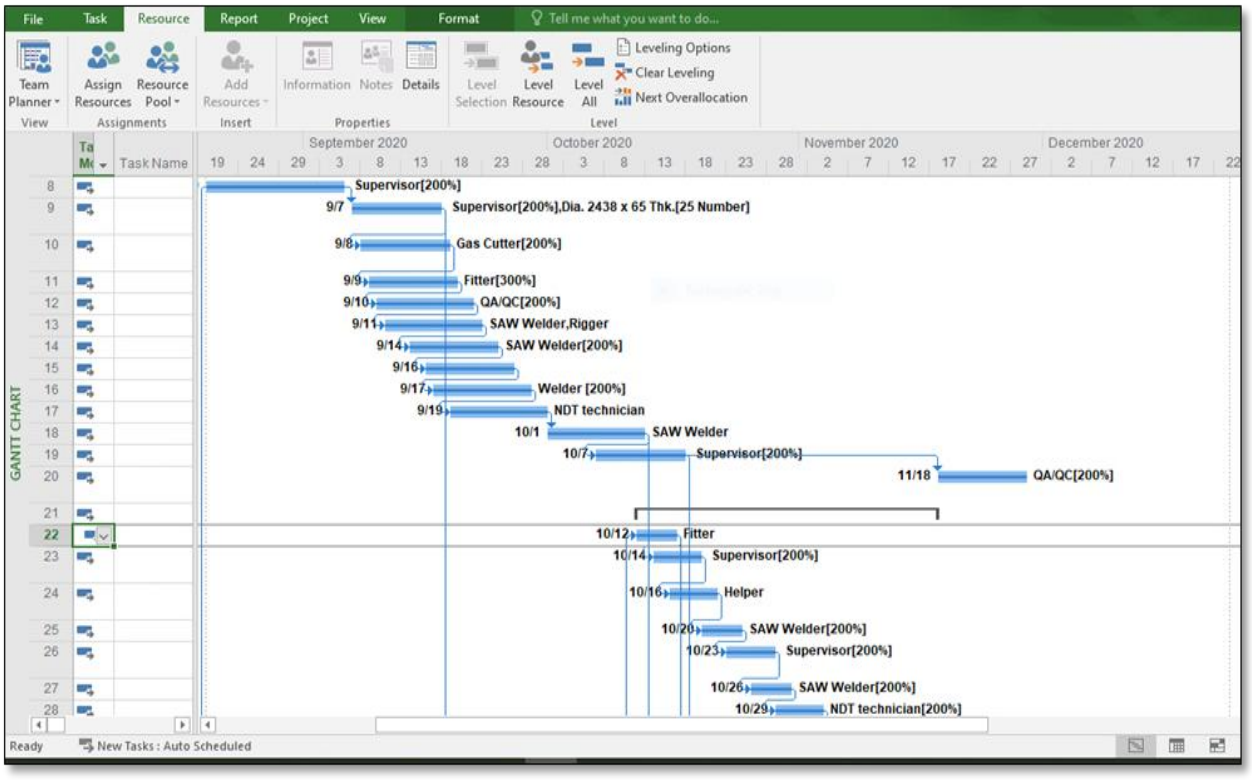


Fig.13: Gannt Chart

3. Resource Optimazation

For resource optimazation we used resource levelling method. Resource levelling increases number of resources. It just manages availability of resources,

a. Resource graph before levelling

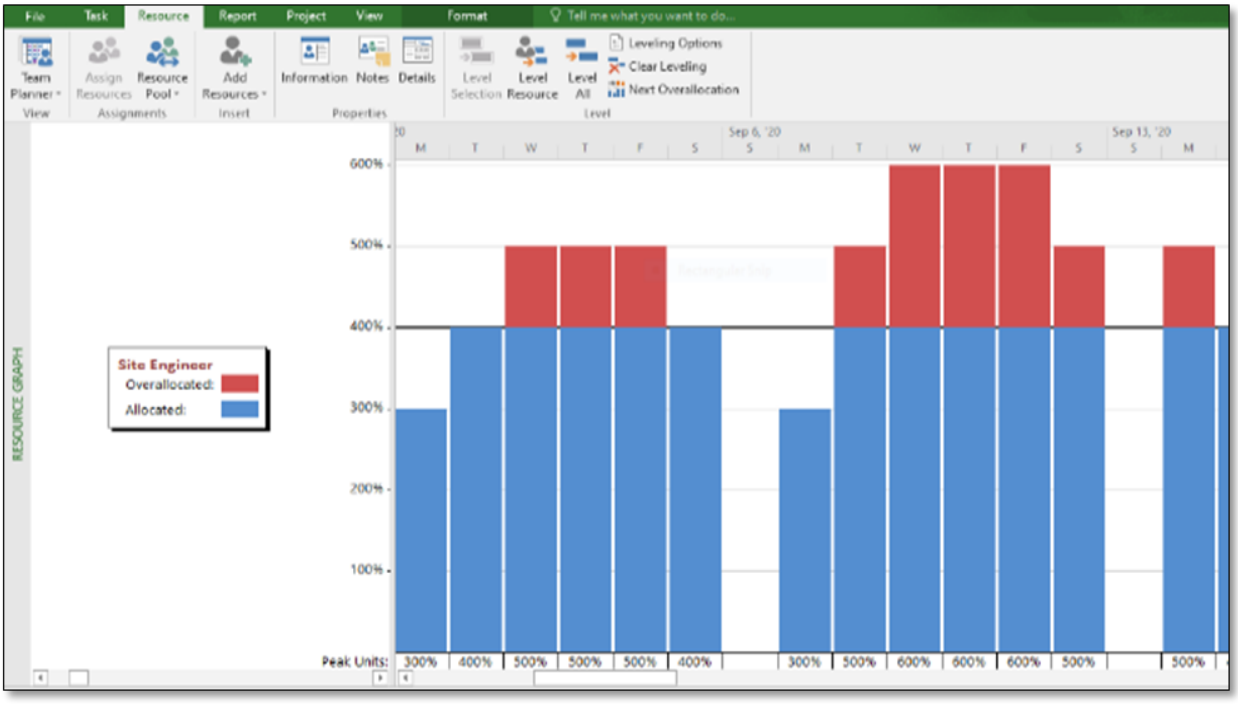


Fig.13: Resource Graph before levelling

The line indicates the availability of resources which indicates the maximum no. of resources a task can use on a particular day.Blue bars indicates the used resources by a particular task and red bars indicates overallocated resources .

b. Resource graph after levelling

Below graph indicates after levelling the overallocated resources are now managed for resourece optimization. And the resources made available on a particular day

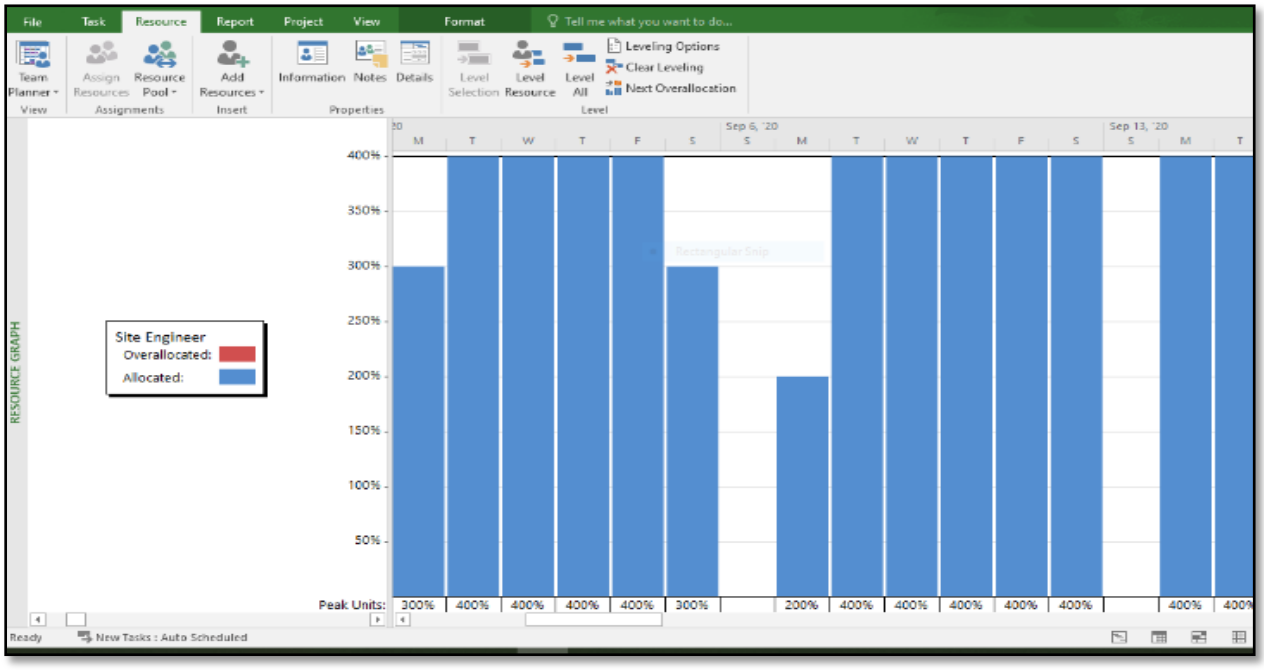
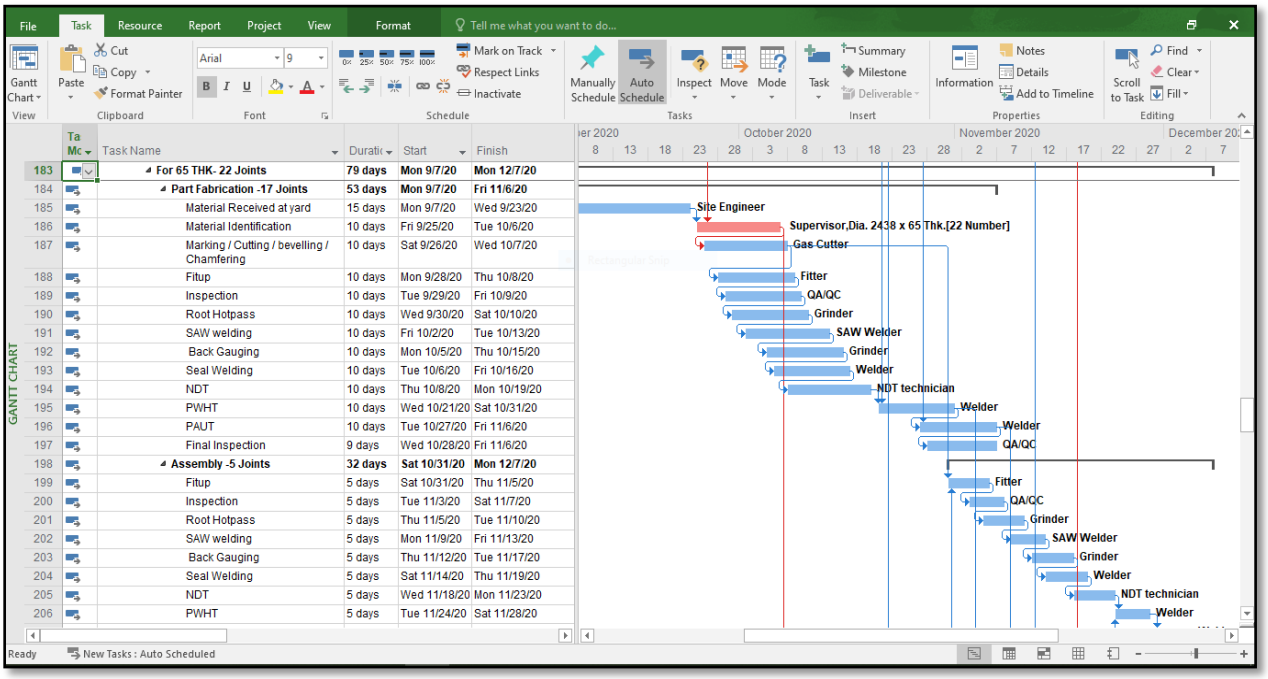


Fig.14: Resource Graph after levelling

4. Final View of Schedule

After completing the schedule we get below detailed schedule.



	Task Name	Duration	Start	Finish
183	For 65 THK- 22 Joints	79 days	Mon 9/7/20	Mon 12/7/20
184	Part Fabrication -17 Joints	53 days	Mon 9/7/20	Fri 11/6/20
185	Material Received at yard	15 days	Mon 9/7/20	Wed 9/23/20
186	Material Identification	10 days	Fri 9/25/20	Tue 10/6/20
187	Marking / Cutting / bevelling / Chamfering	10 days	Sat 9/26/20	Wed 10/7/20
188	Fitup	10 days	Mon 9/28/20	Thu 10/8/20
189	Inspection	10 days	Tue 9/29/20	Fri 10/9/20
190	Root Hotpass	10 days	Wed 9/30/20	Sat 10/10/20
191	SAW welding	10 days	Fri 10/2/20	Tue 10/13/20
192	Back Gauging	10 days	Mon 10/5/20	Thu 10/15/20
193	Seal Welding	10 days	Tue 10/6/20	Fri 10/16/20
194	NDT	10 days	Thu 10/8/20	Mon 10/19/20
195	PWHT	10 days	Wed 10/21/20	Sat 10/31/20
196	PAUT	10 days	Tue 10/27/20	Fri 11/6/20
197	Final Inspection	9 days	Wed 10/28/20	Fri 11/6/20
198	Assembly -5 Joints	32 days	Sat 10/31/20	Mon 12/7/20
199	Fitup	5 days	Sat 10/31/20	Thu 11/5/20
200	Inspection	5 days	Tue 11/3/20	Sat 11/7/20
201	Root Hotpass	5 days	Thu 11/5/20	Tue 11/10/20
202	SAW welding	5 days	Mon 11/9/20	Fri 11/13/20
203	Back Gauging	5 days	Thu 11/12/20	Tue 11/17/20
204	Seal Welding	5 days	Sat 11/14/20	Thu 11/19/20
205	NDT	5 days	Wed 11/18/20	Mon 11/23/20
206	PWHT	5 days	Tue 11/24/20	Sat 11/28/20

Fig 15 : Final View of Schedule

7. Conclusion

1. Project Planning and scheduling can be done effectively using MS Project.
2. MS Project optimizes the decision-making process and improves productivity at work.
3. Resource levelling allows optimum use of resources. Also the resource wastage can be avoided.

4. MS Project is simple to use & can be easily handle.
5. With the help of MS Project project can be completed within the budget and given time frame.
6. We can use different graphical representations, charts, views which are easy to understand.
7. We can control project cost and duraion using MS project.

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