

Engineering Professionalism:

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TOPIC:

Report on Industry visit.

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Engineering Professionalism
Final Report:

First my group members and me tried to contact different industries but they rejected us almost 4 to 5 time after that we got an approval from an industry in Hattar. We visited a plywood industry (**AA PLYWOOD INDUSTRY**) in Hattar. They tell us about the full procedure, machinery they are using, safety precautions they are using and also the material.

Process:

- 1.) First they use a pilling machine to cut down the wood.
- 2.) Than the straight Pieces of wood are placed in open area for sundry.
- 3.) Then those pieces are put into the dryer for further drying.
- 4.) Then those pieces are put into a machine (known as production line) to give them a shape of sheets and also apply glue on them and then put a dry sheet on it.
- 5.) Then they put them into a machine for cool press. Its main purpose is to reduce the cycle time that is needed in case of hot press and thus make the plywood better in terms of quality after it gets glued.
- 6.) Then they put it into hard press and also paste a paper on it.
- 7.) Then those sheets are sent to sawmill for proper cutting.
- 8.) Then they paint the edges and give them a finishing touch.

Workplace Responsibilities:

1. Maintenance and Repairs:

- Conducting routine maintenance on machinery and equipment.
- Identifying and troubleshooting technical issues.
- Coordinating with maintenance teams to address repairs.

2. Team Collaboration:

- Collaborating with colleagues and team members to ensure efficient workflow.
- Communicating effectively with supervisors, peers, and subordinates.

Workers:

There are almost 70 to 80 workers in that industry which includes some local that go there home daily, workers of the same city they go to their home once in a week and some are from other cities who go to home once or twice in a month.

➤ **Worker rights:**

They take care of their employees, their rights and their help as well. Work time is 7 hours (8am to 3pm) and has 1 holiday a week. They also take care of the health of their employees and built a masjid just near to their industry.

Effects on Environment:

The machinery that they were using produces a large amount air as well as sound pollution.

A large amount of scrap is produced during this process.

They provide that scrap to the local public for their works so that also produce air pollution.

Safety precautions:

The plywood manufacturing process involves various machinery, tools, and materials that can pose risks.

1. Personal Protective Equipment (PPE):

- Ensure that workers wear appropriate PPE, including safety glasses, ear protection, gloves, and respiratory protection when handling chemicals or in areas with high dust levels.

2. Machine Safety:

- Provide proper training for employees on the safe operation of machinery and equipment.

Ethical Dilemmas:

The wood that they are using for their industry came from Punjab. They even think it's bad for environment.

They are using large amount of timber especially Eucalyptus (safeda).

Chances of disaster:

Any kind of mistake may cause a huge disaster. Like it set a fire to the whole building even can catch the surrounding in the fire. Many people can be die or can be seriously injure.

Alternate solution of any Disaster:

1. Training and Education:

- Provide comprehensive safety training for all employees, including regular refresher courses.
- Emphasize the importance of adherence to safety protocols and procedures.

2. Emergency Response Planning:

- Develop and regularly update emergency response plans tailored to specific hazards in the plywood industry.
- Conduct drills and simulations to ensure that employees are familiar with emergency procedures.

3. Communication Systems:

- Establish clear communication channels for reporting safety concerns and incidents.
- Implement a system for quick and effective communication during emergencies.

4. First Aid and Medical Support:

- Ensure that first aid kits are readily available and that employees are trained in basic first aid.
- Establish protocols for seeking medical assistance promptly in case of injuries.

Moral and Ethics :

1. Sustainable Practices:

- Plywood manufacturers should prioritize sustainable and responsible forestry practices to ensure the long-term health of ecosystems.
- Adopting sustainable practices helps protect biodiversity, prevent deforestation, and support the well-being of future generations.

2. Fair Labor Practices:

- Plywood companies should uphold fair labor practices, providing safe working conditions, fair wages, and reasonable working hours.

- Treating workers ethically promotes human dignity, fosters a positive work environment, and contributes to social responsibility.

3. Product Safety and Quality:

- Plywood manufacturers have a moral obligation to produce safe and quality products that meet industry standards.
- Providing reliable and safe products contributes to customer trust, satisfaction, and the overall well-being of end-users.

4. Environmental Stewardship:

- The plywood industry should act as responsible stewards of the environment, minimizing negative impacts on air, water, and soil.
- Environmental responsibility involves reducing pollution, conserving resources, and implementing sustainable practices to preserve ecosystems.

Roll of Engineers:

The basic roll of engineer is to make the machine that are safe to use and produce no or very low air and sound pollution.

They should make a system that they if you cut one tree you must plant other in order to maintain the equilibrium in the environment.

Conclusion:

By visiting this industry we got familiar with one of the manufacturing processes used in industry Rolling .It was a nice and a good experience to communicate with the workers and the managing team of the industry who gave us comprehensive details about every process and mechanism of the industry .

