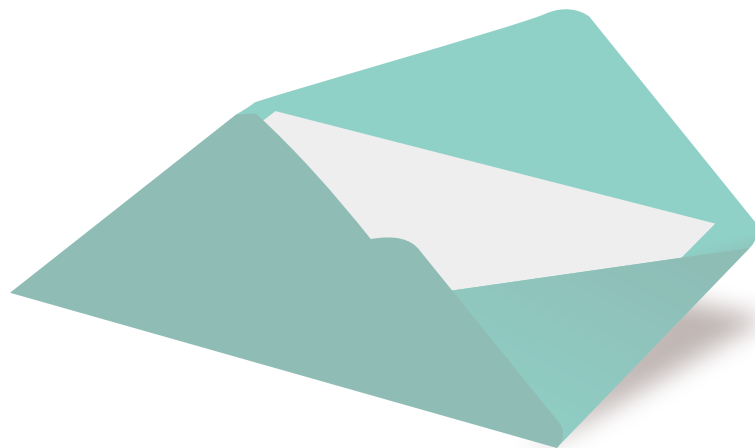


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CADD Sparkler
Offer

Four Key Advanced Manufacturing Technologies Used in

AEROSPACE



Advanced Manufacturing technologies have become one of the most important parts of the Aerospace industry. This is because of the unique challenges that the aircraft designers deal with. The aircraft designs need to consider the environmental conditions using strong materials that are both lightweight and temperature resistant. Such designs require micro and Nano- machining techniques. Here are four advanced machining technologies that are used in the Aerospace industry.

using these materials because of their favorable characteristics of flexibility, strength, temperature and chemical resistance. Composite materials and advanced polymers in the design help to improve performance and reduce lifecycle costs. These materials also reduce the overall weight of the aircraft cutting short their fuel consumption and carbon emissions.

LASER BEAM WELDING

This technology offers rapid and high precision work as compared to the traditional welding techniques. Laser welding is, therefore, a preferred solution for handling materials when repeatability and high accuracy is required. The most advantageous property of this technique is that it transfers very little heat to the material that is welded. This way it does not create a heat affected zone around the weld, ultimately not compromising the strength and performance of the material.

ROBOTICS

Robots are used in the aerospace industry to manage the labor-intensive process, particularly when lifting and handling tasks are to be done. The industry is using powerful robots in its manufacturing plants to move and join aircraft parts. Robotics is also taking care of manufacturing process that is hazardous to people such as painting and welding.

ADDITIVE MANUFACTURING

The Aerospace industry was quick to identify the benefits and potential of Additive Manufacturing to design its planes. The technology uses Power-Bed laser printing systems to build its most components. Additive manufacturing technology is used to build structures that work within the fuselage with features such as reduced weight and reduce heat. An additive manufacturing technique, commonly known as the Fused Deposition Modeling, is used to create semi-hollow parts of the aircraft wings by both adding strength and reducing weight.

COMPOSITE MATERIALS

Composite materials are widely used to design aircraft. Aerospace engineers prefer



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WINNING STRATEGIES TO LAND THAT GREAT ENGINEERING JOB



Getting a perfect job is something every professional is looking for. But there are some hurdles you need to take care of before you get hired by the employer. To get the job that fits you perfectly, you need to get through all the structural hurdles to prove your suitability for the desirable job. Therefore, it requires a carefully crafted strategy that reflects your strengths for the position sweeping aside all the obstacles. In the era of choreographed construction.

1. Crafting the Resume

Preparing a tailor-made resume for the position you are applying for is necessary. Your resume should clearly mention all your skills, experiences, accomplishments, and education that perfectly align to the job posting. It is best to rank and rearrange the job-relevant skills and experience to catch attention from the recruiters.

2. Passing the Applicant Tracking Software

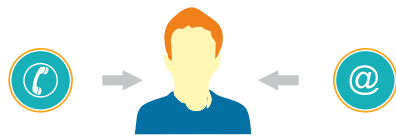
Most of the engineering firms today use a software tool to filter out a resume for a single job posting. While every tool follows a different set of rules, some guidelines can help you win this game. The primary one is to keep it simple using the standard fonts and avoiding any fancy elements such as colors or pictures. Secondly, format the document clearly and group the relevant information. Also, use clear and common terms to make it readable.



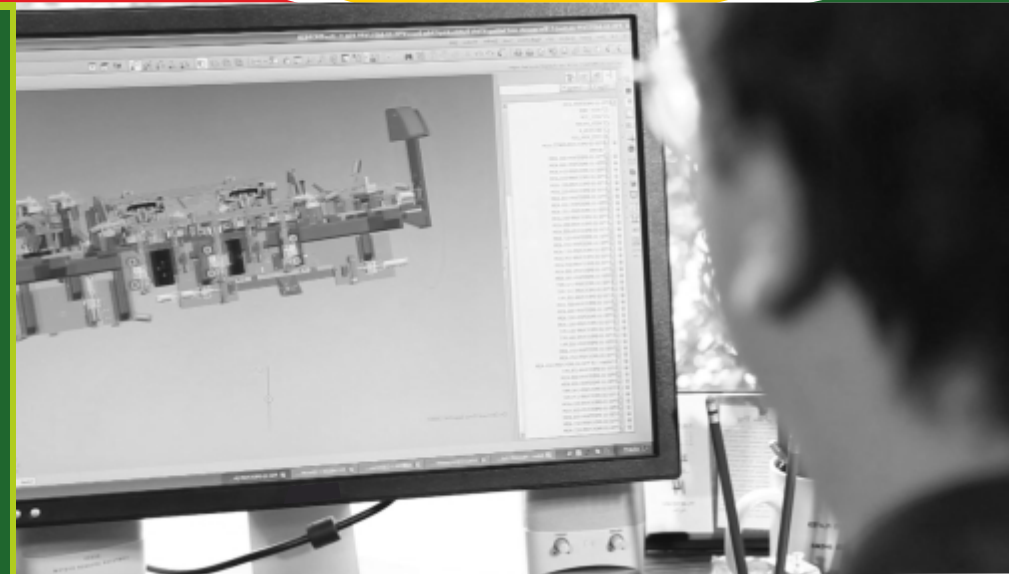
3. Always Follow-up

This is one of the most overlooked parts of applying for a job. It is best when you go for a follow-up with the recruiters as it denotes an expression of interest from your side. A phone call or a follow up email sometimes can make them pull your application from the pile.

Apart from the things discussed above, you also need to prepare yourself for face to face meet ups. To grab the opportunity, you strive for, research about the company and its goals. It is recommended to use every set of your skills and abilities to maximize your chance of success.



SKILL DEVELOPMENT AND CAREER FUTURE IN CAD INDUSTRY



The world has experienced a huge rise in Information and Technology in the recent past years. The current scenario in the field of science and technology have showcased the power of technology and skills. Being one of the fastest growing economies in the world, India needs a more skilled workforce to compete with the world.

A Degree isn't Enough

When it comes to technical graduates, there is a countless number of engineers that pass out every year. But these graduates still lack the skills and expertise required by the industry. Engineering graduates undoubtedly have good grades. Still, there is huge talent gap that needs to be filled to make them immediately employable.

Graduates Needs to be Multiple Taskers

Employers across the industries are always hunting for people that are multiple taskers. This means that graduates need to have more than one skill or even one particular mastered skill. Not only technical skills, but the industry also expects the graduates to have a personality & soft skills to work in the industry.

Need of Skill Development

With the change in technology, the industry today needs more skilled manpower. For instance, regarding CAD, all the manual work is replaced by computers and drawing pencils are replaced by mouse. Thus, to fulfill the needs of the employers and to make a future in the industry, the youth needs some additional technical training.

Career in CAD Industry

CAD technology is most widely used technology across industries. Civil, Electrical and Mechanical domains are hiring technical graduates that are well acquainted in CAD and its applications. It is therefore, important for the engineers to learn and master these skills. CAD is one of the lucrative fields in the market that demands highly skilled and competent engineers for the market.

India expects highly skilled manpower from the upcoming generation. These expectations can only be met when the engineers are technically trained to work across the industries.

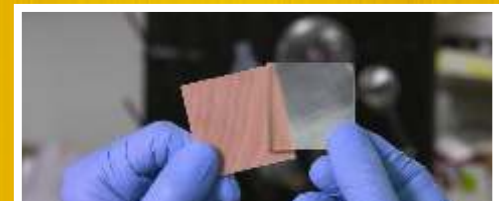


Transparent Wood: Revolutions Ahead in Architecture and Electronics

Research groups from the University of Maryland and the KTH Royal Institute of Technology introduced some chemical solutions that could make the wood completely transparent. This resulted in a glass-like wood you can see through. Wood is always a preferable material as compared to its existing transparent rivals such as plastic and glass. This transparent wood will soon revolutionize electronics and architecture as:

- Wood seems to possess some benefits over glass and plastic for architectural use.
- Its lower thermal conductivity keeps the buildings at a more consistent temperature making it reach higher energy efficiency levels.
- In the electronic world, the transparent wood might be used to manufacture solar cells.
- These low-cost cells will be readily available and can be a potential solution to build solar panels for large surfaces.

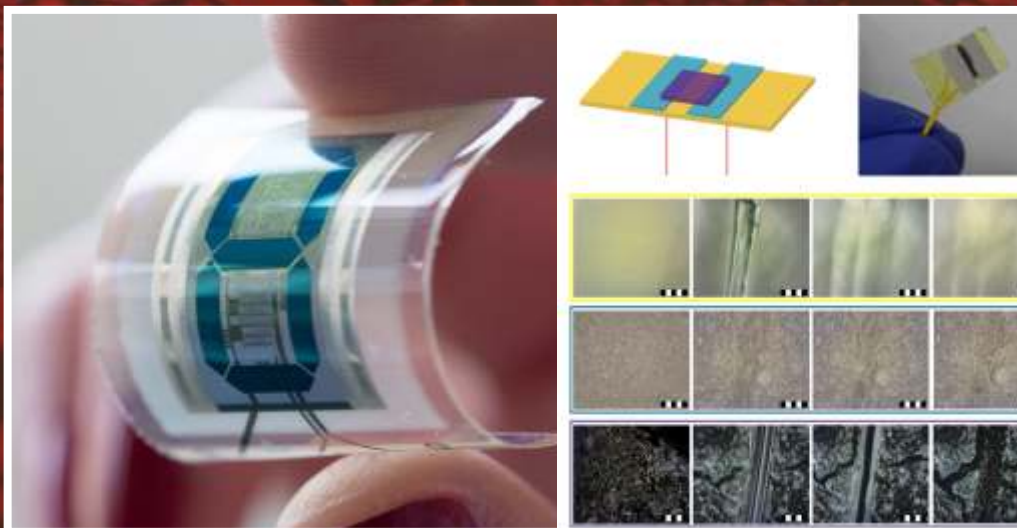
The transparent wood laser is another interesting application that is created by embedding an organic dye into the wood. These organic lasers have unique optical properties that can further enhance biophysics. The researchers believe that soon we will witness this technology.



Self-Healing Electronics: A Superpower from Sci-Fi Transformed to Everyday Devices

Inspired by the Wolverine an X-Men character, a group of researchers created transparent, self-repairing and a highly stretchable material with electronical activation capabilities. This material is suitable especially to improve the performance of electronic devices such as smartphones and robots. Such material is created by combining a stretchable polar polymer with an ionic salt. Some of its features are:

- ☐ This material has stretching capability to expand itself up to 50 times its size.
- ☐ It can automatically repair itself within 24 hours of damage.
- ☐ One of its applications can improve the battery lifetimes of the electronic devices



One of the professors from the team believes that the market will have a range of self-healing products within the next three years such as the smartphone screens. Self-repairing robots is the most exciting

application the scientists are working on. Although this material will change the lifestyle of people, scientists are still exploring its applications.