# **50 Projects**

## PISTON FOR INTERNAL COMBUSTION ENGINES

Piston is one of the most important item in the automobile industries. There are mostly disc like structure of the piston. Now a day's piston are made of cast iron or by aluminium in presence of 10% sand in it. There is a vast demand of piston and it is directly related to the two-wheeler production.

#### NON GLAZED CERAMIC TILES

The world ceramic is taken to cover those articles that are made from inorganic substances first shaped and then hardened by fir. The characteristics are the wall tiles with colourless or pastel shade glaze with on-glaze decoration. Decorative tiles, frequently in a number of shapes and with relief designs and in a range of sizes.

## ABRASIVE & FLINT PAPER

Abrasive is a mixture of granular corundum or dark colour, having impurities of magnetite and hematite. It is a very strong and hard material, therefore, used as an abrasive for varying purposes. The paper or cloth coated with emery is known as emery paper or cloth. Emery is a natural mineral, corundum having certain impurities.

## **MATCHBOX**

Matchbox is one of the most important items. Though it is looked upon as small and insignificant, earlier it was a big problem. In the 17th century, people used phosphorous and sulfur together using flints or sticks of woods. It was then found in the 19th century that using non-provisions red phosphorous on the match head instead of white phosphorus.

## STRAW BOARD SLATES

The straw board slate is an important item for school. They are economical as they can be used again and again. They are used particularly by primary school students to improve their handwriting.

## CEMENT ROOFING TILES

Roofs are basic element of shelter to protect the people themselves from cold, wind rain and sun. Tiles are thin slabs of baked clay used for construction of roofs, walls or floors. They may be plain or ornamented, and glazed or unglazed. Tiles are also made from marble, cement or plastic materials.

## DISPOSABLE PLASTIC CUPS, PLATES AND GLASSES

The plastic in India plays a very important key role in industrialization. A wide spectrum of plastics and its articles have touched the life of every Indian is many ways through consumer plastics. Disposable cups, glasses and plates are used in daily life now a days. In addition to be used at home these are largely used in parties and other functions.

#### **OXYGEN AND NITROGEN GAS PLANT**

Oxygen (CO2, gas at 00/1 matm., 1.429g./l, crit. Pressure, 49.7 Matm.) is a colorless, odourless, and tasteless gas, somewhat heavier than air. It is one of the most active elements and plays on essential part in the respiration of living cells and in combustion.

## WOODEN LABORATORY FURNITURE

The most common, versatile and oldest material that is used for making furniture is wood. Almost all varieties of furniture can be made of wood. Wood is a soft material and can be easily shaped. The finish obtained is very good and occasional polishing can make it look like new at all times.

## **DISPOSABLE PLATES FROM BANANA LEAVES**

Disposable cutlery and containers are products that are a part of our day to day life. Disposable items like cups, plates, saucers are being increasingly used. Such disposable items are made with natural materials like leaf as well as man made products like paper, plastics. Leaf cups, plates have greater hygiene value.

## WOODEN FURNITURE

The furniture making is an ancient art in India before centuries. The expertise of India in manufacturing furniture was accepted by all the parts of the world. Wooden furniture is made in cottage and households industries. It is also made in small to large scale sectors.

## CHIP BLOCK (COMPRESSED WOOD)

Wood waste is, by far, the largest portion of the waste stream generated from wood working Industry. Almost everyone in the woodworking business has a problem with wood scrap, chips and sawdust occurring as a by-product of woodworking. From the mill to the finished product, this offal represents an impressive amount,

## **NATURAL COLOURS**

Capsanthin(paprika oleoresin) from chilly/ paprika capsicum -Curcumin from turmeric -Lycopen from tomatoes and other red fruits India, recognized as one of the hotspots of biodiversity is home to a range of economically important plants.

## **INSULATOR**

Electricity play a vital role in the development and growth of Agriculture and Industry, As such, it is a high priority item for all the developing or developed nations. For the generation and distribution of Electricity, High Tension Insulators are an important adjusts.

## **BIOGAS PRODUCTION**

An effective biogas programme leads to efficient use of cow dung for gas recovery and partial supplement to plant nutrient requirement. Biogas programme leads to improvement in rural living including rural sanitation.

Biogas fermentation a process occurring widely in nature can be defined as a biological process,

## CHARCOAL FROM COCONUT SHELL

Charcoal and purity of any substances has now become a basic requirement of any chemical substance. So many products obtained by processing are dirty in colour and having so many impurities. This problem can be easily solved by adsorption of which carbon has become one of the most generally used materials for the purpose, animal matter.

# **ACETYLENE GAS**

Acetylene is a colourless inflammable gas. It is an endothermic compound. It is an endothermic compound. Its heat of formation being nearly 50 Kg. Cal.g.mol. Both the gas (tc, 370; Pc, 62 atm.) and the liquid (b.p., 83.60) are highly explosive, particularly under pressure. The gas forms explosive mixtures with air.

## **CHOCOLATE**

The covering of chocolates was originally carried out solely by hand the process being known as hand dipping. Each piece or centre was handled individually, dropped into molten chocolate, covered and finally placed a plaque to set. The chocolate is conveyed by a series of rotating drums to the upper part of the machine,

## GYPSUM PLASTER BOARDS

For a building being constructed the one and only thing which is to be considered is its strength of bearing load of both environmental artificial. But now-a-days not only strength but the look of the construction also matters. For giving good strength & attractive look Gypsum Plaster Boards are used.

## PAPER BAGS FOR WHITE CEMENT

Paper bags are very economical, efficient and safe package for an impressive and constantly growing range of products. It can protect the cement very precisely from moisture and other attacking agents curing storage. In order to avoid loss of cement paper bags should be used rather than jute bags.

## **RUBBER GASKETS**

There is competitive growth of rubber gaskets in market. Gasket should be smooth, inert -towards water and normal chemicals, physically strong and should not be corrosive. It is mainly used between the pipelines to make leak proof alignment or joint.

## **CRUSHED STONE**

Crushing of stone is physical process applied over the available natural stone to reduce size. Crushed stone should be hard enough to withstand heavy load or should not react with acid or alkali it is used in road construction, civil construction as supporting material in railway tracks etc.

## **BITUMEN**

It is non crystalline solid or viscous material having adhesive properties, which is completely soluble in carbon disulfide. It is generally brown or black in colour, electrical resistance, solubility or resistance to solvent action and resistance to oxidation under various conditions. It is derived from petroleum either by natural or refinery processes.

## **BANANA POWDER**

Banana powder is prepared from pulp of fruits after mashing and drying in a drum or spray driers. Then dried product is pulverized and passed through a 100-mesh sieve. It is a free flowing powder which is stable minimum for one year after packaging. It can be used in bakery and confectionery industries,

## COPPER POWDER BY ELECTROLYTIC PROCESS

The principal methods for producing copper powder is electrolytic deposition at high current densities and the atomization of molten metal. Copper powder is also formed by cementation or by pressured precipitation from acqueous solutions, but such precipitates are of little commercial interest.

## **AUTO LEAF SPRINGS**

The automobile uses three basic types of spring is coil, leaf and torsion bar. Regardless of the type of spring, all springs work in a similar manner. Springs are placed between the frame and the wheel axles. Leaf springs are of two types: Multi-leaf and Single 2. Leaf. An industry mfg. Auto leaf springs,

## **BRICKS FROM FLY ASH**

Bricks may be made from a no. of different kinds of materials but they must usually possess a certain amount of plasticity. Fly ash is one of them. Fly ash is an industrial waste of thermal power station using pulverized coal. Fly ash generally contains about 5% to 6% unburnt carbon. Its addition in clay,

## WOODEN TOOTHPICK

A toothpick is a small stick of wood, plastic, bamboo, metal, bone or other substance used to remove detritus from the teeth, usually after a meal. A toothpick usually has two sharp ends to insert between teeth. They can also be used for picking up small appetizers or as a cocktail stick.

## **BROOM STICK PROCESSING PLANT**

Broom stick is well known to all. It has been largely used by domestic people, commercial complexes, industrial people etc. It is generally prepared by using coconut leaves or special type of bamboos. There is a good market demand of this product and it's associated product like handle.

## **ARTIFICIAL MARBLE TILES**

With the vast potential of plastics, artificial synthetic marble is virtually replacing the use of natural marble. The qualities of artificial synthetic marble are very much the same as those of natural marble. Synthetic marble is produced out of fillers and synthetic resin is used as binder.

#### SAND LIME BRICKS MANUFACTURING

In the construction industry in India, while efforts are being made to introduce new technologies to expedite the work process and streamline it, the materials incorporated in production have not seen much upgradation. Sand lime bricks are used for the all building construction.

#### RAZOR BLADE

The safety razor is providing with guards on both sides of the cutting edges, which restrain the age from digging into the skin. Development in razors and improvements in the quality of the blades resulted in a large acceptances of safety razors as the instrument for the shaving and today it is a commodity of everyday use in all part of the civilized world.

## API TUBE

Piping may represent as much as 25% of the cost of a chemical process plant. The economics depends heavily on the pipe size and fabrication techniques employed. Heat tracing for insulated pipes is generally only required for the period when the material in the pipe is not flowing.

## **WOODEN DOORS AND FRAMES**

Carpentry and joinery are common terms used with any class of work with wood. Strictly speaking carpentry deals with all works of a carpentry such as roofs, floors, partitions, etc. of a building, while joinery deals with the making of doors, windows, cupboards, dressers, stairs and all interior fitments for a building.

## **ENAMELED COPPER WIRE**

Enameled wire is an insulated wire used in winding of armatures in transformers, switch gears and other electrical equipments. When connected to the main supply a magnetic field is developed around the enameled wire coil and it helps to the conversion of electrical energy into mechanical energy as case of motors.

## ADMIXTURES FOR CONCRETE

Admixtures are materials added to the concrete before or during its mixing, with a view to modifying one or more of the properties of concrete in the plastic or hardened state. An important feature of the majority of admixture for concrete is that it is difficult to quantitatively evaluate the behavior of the concrete under various possible circumstances.

## TUBE MAKING FOR UMBRELLA

There required large amount of hot rolled or cold rolled coils and strips for manufacturing of steel tubes. One of the major use of this tube is for making umbrella tube. A fair market for umbrella is available in India. Therefore, the consequent demand of umbrella tubes is also very satisfactory.

# PAPER NAPKINS, TOILET ROLL & FACIAL PAPER FROM TISSUE PAPER ROLLS

Hygiene is an essential component of healthy living, integral to achieving health and preventing disease. Not just selecting the right food choices but also cooking & consuming them in a hygienic way is equally important in preventing the infectious diseases. Adopting hygienic practices and promoting hygiene in the community, schools and workplace prevents innumerable infectious disease.....

#### **SOLAR PANEL**

A solar panel is a collection of solar cells. Lots of small solar cells spread over a large area can work together to provide enough power to be useful. The more light that hits a cell the more electricity it produces, so spacecraft are usually designed with solar panels that can always be pointed at the Sun even as the rest of the body of the spacecraft moves around, much as a tank turret can be aimed independently of where the tank is going.....

#### E-WASTE RECYCLING PLANT

Electronic waste, e-waste, e-scrap, or Waste Electrical and Electronic Equipment (WEEE) is a loose category of surplus, obsolete, broken, or discarded electrical or electronic devices.....

#### LED LIGHT ASSEMBLING

A light emitting diode (LED) is a device which converts electrical energy in to light. LEDs are preferred light sources for short distance (local area) optical fiber network because they are inexpensive, robust and have long life (the long life of an LED is primarily due to its being a cold device, i.e. its operating temperature being much lower than that of, say, an incandescent lamp), can be modulated (i.e. switched on and off) at high speeds.

## **BISCUIT MAKING PLANT**

Biscuit industry in India in the organized sector produces around 60% of the total production, the balance 40% being contributed by the unorganized bakeries.....

#### **BREAD MAKING PLANT**

In modern days bread is now becoming one of the most essential food item in human diet due to its readymade availability and high nutritive value. It is the most consumable wheat based bakery product.....

## **BAKERY INDUSTRY**

Bakery is one of the oldest among the food processing activities. An estimated 78,000 bakeries operate in India. The production of bread is estimated at 11.5 lakhs tonnes and biscuits at 7.8 lakhs tonnes....

## SANITARY NAPKIN & BABY DIAPERS

A diaper or nappy is a kind of underwear that allows one to defecate or urinate in a discreet manner. Diapers are primarily worn by children who are not yet potty trained or experience bedwetting.

## **ELECTRIC MOTORS**

The extensive utilization of many types of constructional variants of electric motors in industry, commerce and the home would make a comprehensive guide for their selection, application and maintenance runs into many pages.

## MOSQUITO REPELLENT LIQUIDATOR

There are some essential oils which have property to repellant of mosquito. Mosquitoes cannot bear the flavour of essential oil though they do not die but they run away. Raw material required for manufacturing of essential oils are easily available in the market.

# SOLAR PANEL ASSEMBLING & SOLAR POWER INVERTER ON GRID, OFF GRID WITH SOLAR PUMP CONTROLLER

A solar cell, sometimes called a photovoltaic cell, is a device that converts light energy into electrical energy. Solar panels generate free power from the sun by converting sunlight to electricity with no moving parts, zero emissions, and no maintenance.

# MACARONI, VERMICELLI, NOODLES AND INSTANT NOODLES WITH TASTEMAKER

Extrusion-technology is gaining increasing popularity in the global agro-food processing industry, particularly in the food and feed sectors. Extrusion cooking technologies are used for cereal and protein processing in food.

## UPVC PROFILES FOR DOORS AND WINDOWS

uPVC products are fire retardant. This is because they contain more than 70 % unplasticised uPVC which turns 57% Chlorine. This contribute efficiently to the flame retardant. Further, it has very high ignition temperature 400°C against 210°C of wood and has an index of 50% against 21% for wood.