

MACHINES / EQUIPMENT / PROCESSES FOR PLASTICS

WORLD ASSOCIATION OF TECHNOLOGY TEACHERS <https://www.facebook.com/groups/254963448192823/> www.technologystudent.com © 2018 V.Ryan © 2018

INSTRUCTIONS

RESEARCH EACH OF THE MACHINES / PROCESSES SHOWN ON THIS SHEET.

THEN, CREATE AN INFORMATION SHEET FOR EACH ONE, WHICH SHOULD INCLUDE SKETCHES AND NOTES.

YOU WILL FIND MOST OF THE INFORMATION YOU NEED IN - THE 'EQUIPMENT AND PROCESSES SECTION' AND/OR THE 'POWER TOOLS SECTION' AND/OR THE MATERIALS SECTION OF: www.technologystudent.com

1 VACUUM FORMING

HEATER

CUTTER AND HOLDER

DISMANTLED CUTTER HOLDER

HARDENED STEEL CUTTER

CUTTER MOVES RIGHT TO LEFT AND UP AND DOWN AS IT FOLLOWS THE DESIGN OF NET / DEVELOPMENT

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2 VINYL CUTTER

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3 STRIP HEATER / LINE BENDER

RESTS FOR PLASTIC

MAINS LEAD

HEATER DIAL ON/OFF

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4 LASER CUTTING AND ETCHING

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5 POLYURETHANE AND FOAM RUBBER

isocyanate

polyol

polyol and isocyanate being mixed

Small amount of water added

EXPANDS

Foam rubber the result.

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6 COMPRESSION MOULDING

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7 FILAMENT SPOOL 3D PRINTING

FILAMENT GUIDE TUBE

PRINT HEAD CABLE

FRONT VIEW

PRINT HEAD

BUILD PLATE

BUILD PLATE SCREWS

DISPLAY

SD-CARD SLOT

MENU SELECTOR

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8 NYLON MANUFACTURE

Nylon (Polyamide)

diamine acid

INTERFACE

dicarboxylic acid

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9 PROFILE CUTTER

HEIGHT ADJUSTMENT

ADM

GUARD

CUTTER

ON/OFF SWITCH

FOOT SWITCH

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10 ADHESIVES FOR PLASTICS

TENSOL CEMENT

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11 BLOW MOULDING

PLASTIC POWDER

COMPRESSED AIR IN

HEAT

HEAT

HEAT

MOTOR

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15 ROTATIONAL MOULDING

1 MOULD FILLED WITH POLYPROPYLENE POWDER

2 HEAT 300 °C AND ROTATION

3 COOLING STATION FANS AID COOLING

4 MOULDED SHAPE REMOVED

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12 EXTRUSION

FLUID PLASTIC FORCED THROUGH DIE

STEEL DIE

PLASTIC POWDER

HEAT

HEAT

MOTOR

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13 CRUDE OIL TO PLASTICS

1 OIL FIELD

2 OIL TANKER

3 CRUDE OIL REFINERY AND DISTILLATION

4 DISTRIBUTION

5 NAPHTHA / PLASTICS PROCESSING PLANT

6 PLASTIC GRANULES

7 FACTORY

8 PRODUCTS

PVC POLYVINYLCHLORIDE

NYLON

POLYESTER

POLYSTYRENE

POLYURETHANE FOAM

POLYPROPYLENE

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14 INJECTION MOULDING

HIPS, HDPE, LDPE, PP, Acrylic (PMMA), ABS

MOULD

HEAT

HEAT

HEAT

HOPPER

ARCHIMEDEAN SCREW

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