

This procedure has been completely reviewed. Therefore no individual paragraphs have been starred (*) to indicate changes.

1. AIM

To define the actions, authority and responsibility within the Company necessary for adequate control of the manufacture of plastic components.

2. SCOPE

All moulded or extruded plastic components manufactured to stock or customer specifications.

3. RESPONSIBILITY

Moulding and Extrusion Manager: for overall management and co-ordination of manufacturing and inspection activities.

Operatives: conducting all work allocated by Manager in accordance with procedures and to the required quality.

4. ADMINISTRATION

Computer Works Order
Specification File
Inspection Log
Component Specification and Inspection Details
Settings Form
Weekly Maintenance Checks
Extruder Settings
Mould Change Check List

5. QUALITY RECORDS

Works Order (Inspection Records)

6. IMPLEMENTATION AND CONTROL

6.01 Production Planning & Scheduling

Production Control is responsible for preparation of the works specification by producing and printing a Works Order from customer's order details. A stock requirement creates a Works Order but this is not printed. This information can be viewed on the computer system and a weekly plan refers to stock orders being manufactured.

The Department Manager is responsible for planning the workload within the department and along with the Production Team ensuring resources are available to complete the work within the estimated lead times.

Resource planning includes the following elements:

- a) sufficient materials to meet Production lead times liaising with Production Buyer and Production Controller;
- b) plant and equipment in good working order and within calibration due date where applicable;
- c) sufficient numbers of trained personnel allowing for seasonal fluctuations.

Work is then scheduled in accordance with the due date instructed on the works specification and Production Control advised if this date cannot be met.

6.02 Production & Inspection

All Operatives have undertaken or will be receiving in-house training on the tasks they are required to complete as part of their day-to-day duties.

The working area is kept appropriately clean and free from clutter to prevent damage and preserve the quality of material whilst in progress. Any materials lying around and are not for production purposes are clearly identified as to their intended use or as a non-conforming item.

The job is allocated to a Tool Setter who sets-up the machine and conducts the following checks as appropriate, on the first-off product:

- a) even distribution of material;
- b) no unspecified thick or thin walls;
- c) colour evenness;
- d) stability of product;
- e) fitting check with other components;
- f) dimensional checks;
- g) conformance with specification for other features

Product Specifications are available for all items manufactured by the mouldings and extrusions department defining raw material specification, machine set up parameters and product dimensions and tolerances.

Raw materials are received in the Department via Goods In who are responsible for an initial inspection i.e. correct quantity and condition of packaging. The goods are receipted at this point.

The Department is responsible for a more detailed inspection, details of which accompany the material into the Department if appropriate. All inspection forms will be filed in the Production Office.

If the product fails inspection the Production Buyer is advised who liaises with the Supplier to resolve the problem. Production Control are also advised as this may affect product lead times.

Mouldings and Extrusions are batch produced and inspection is conducted accordingly as follows:

First-Off: to establish that the raw material is of the required quality and that the machine has been set-up correctly. Adjustments are made to the machine set-up if necessary until the product is of the required specification as defined.

The Inspection Log First-Off stage is signed as complete.

In-Process: hourly checks are conducted to monitor the features defined at the First-Off stage and recorded on the Inspection Log by the Operatives.

Spot Checks: are conducted by the Manager especially where more complicated products are involved and countersigns the appropriate stage on the Inspection Log as evidence of this.

Final: sample pre-pack checks are taken to ensure that the product has not altered during the cool down process and that the dimensions and fitting with other components is still correct.

All such inspections are recorded on the Inspection Log and signed and dated by the Operator or Manager responsible for passing the work as conforming to specification.

If at any stage the material, sub-components or finished item is thought to deviate from the works specification, it will be dealt with in accordance with the Control of Non-Conforming Product Procedure.

6.03 Identification, Packaging & Despatch

The product is packed according to the works specification taking into account any special identification and delivery requirements.

Customer orders are identified with customer details and/or the works order number. Stock orders are identified with the product code.

Completed items are stored in the holding area for either transfer to the main warehouse stock or the despatching bay for customer orders. This transfer is conducted by warehouse personnel. Works orders are either completed by the department staff member and then passed to Production Control for filing, or passed to Production Control for completion and filing. Stock orders are filed in the Production Department and customer orders attached to the order acknowledgement and distributed as follows

Finance – if carriage already charged
Despatch – if carriage to be calculated
Export sales – all export orders

If the order is only part complete, the quantity and date are written on the works order. If the works order is part completed by the department then they will hold the works order until fully completed. If the works order is part completed by Production Control they will file and re issue the remainder of the works order.

All subsequent handling and interim storage of the finished product is conducted to preserve its quality until it finally reaches the customer.

To further improve identification/traceability pipe coding is included on the pipework.

7. MAINTENANCE

Regular maintenance activities are carried out in the department as detailed below:

Daily Inspection Log is completed by the operator for each machine when in use.
Weekly Maintenance Check these are carried out on all machines.

At the end of each change of mould a report is completed.

Cross References

Works Order Processing
Goods Inwards
Storage & Stock Control
Despatch
Maintenance
Calibration

Control of Non-Conforming Product
Training