

The Analysis Influence of Elements the Processing on Quality of Products

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Abstract

Present productive systems demand cooperating very much elements of complicated processing whose a superior target is the obtainment of the article about established functional proprieties. To important links of the productive system they belong the boundary strip other: the quality of raw materials, the technical state and the efficiency of productive devices, the choice and the organization of the processing and difficult to prognosing, so called the human factor.

On the job one presented the initial analysis of connected problems with the preparation and the realization of the processing in the foundry of cast iron. Became introduced manner of administering resources of materials which to the state the complex connection of the row elements technological, such as: the analysis the quantity of orders and time-limits deliveries, qualifying the quantity of elements the given productive party, time-limits of beginning of the production and the manner of working of the warehouse- economy farm. The special attention became turned on analysing problem of storing productive materials.

Keywords: The manufacturing process, Warehouse- economy, Costs of producing, Management

1. The introduction

In present industrial companies the elementary part performs the problem of administering with the process production of products, with the special regard of technological problems. Accordingly one behaves definite research and the analysis of each technological stages and productive endeavour in the process of producing elements in the production plant. With the example can be the elaborative foundry elements for the motorization. An target of such working is the endeavour to the improvement of the manufacturing process.

The production of concrete material interests to the state determines the so complicated processing. The management a production is a knowledge from the range of the business management. There permits to adapt the manufacturing process to current market requirements..

2. Basic qualifications

Into the range of administering with the production enter following elements:

- the management of technology containing gaining over and the initiation of the new technology.
- the idea on the product and the processing - the initiation of new products, dynamics, development of product and the processing.
- the qualification of the size, location and parameters of the production line having the influence on the effectivity, the quality and operating costs.
- the production planning with the computer programmes.

Interdependences in the manufacturing process one represented on fig. 1.

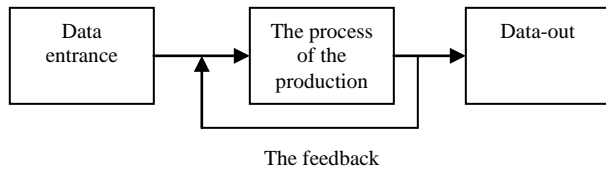


Fig. 1. The flow chart of the process

Input data embrace resources material, energy, inquiry, human and capital. Data-out embrace products and services and waste material. The process of the production consists of the stage of the preparatory, proper technological stage, the transportation and warehousing and storing.

The processing determines the part of principle the basic manufacturing process. The structure of the productive basic process in seizing technological this is the system of homogeneous phases and technological operations along with connections of materials, energy and inquiry requisite to producing of the article. Within the framework of every from phases appear operations: technological, as the inspection, the transportation and the storing.

The structure of the basic productive process in seizing objective embraces the system of manufacturing processes of each parts, elements and teams and the montage the final product along with connections materials, energy and inquiry, requisite for producing of the final product. In seizing technology of a group this structure is characterized with the identification and with the group on the stage of projecting the article and projecting of the proper technology producing the article.

3. Manners of organization in the course of production

In the process producing of products for the casting, industry we can favour several methods of the organization course in the production line. This is dependent on among other things from the infrastructure, the surface of hall and the decay and efficiencies of industrial devices.

We favour:

- a) the course arranged in following- consists in this that the all party of details is poured off on one position and only after executing of all products is sent on the following position,
- b) the parallel running - is characterized this that single casts delivered are on following positions at once after executing on the preceding position,
- c) the course serially - parallel - in delivering of products between positions, one by one,

Advantages and defects of each manners the organization course production:

The course arranged in rows:

- the ease of directing with the production - positions of flooding work without pauses - following positions have consequential standstills from waiting on the party of products, what causes the

considerable extension the working period and increases operating costs.

The parallel running:

- without pauses works the pursuant position most of all casts on remaining positions appear of short duration, difficult to bringing into cultivation of the pause the causing low utilization of the stock of machinery,
- greater advantages one attains synchronizing the work of workplaces. Installing parallel positions for executing of longer operations.

The course serially parallel:

- makes possible the shortening of the production comparatively to the cycle arranged in rows;

4. The planning needs of materials

With a process of production, especially products for needs of the heavy industry, in this of casts large, is connected the considerable waste of materials.

With the point of view of the foundry the planning embraces:

- immediate productive indispensable materials necessary of the planned production eg. the steel- scrap-metal , alloy- additional , sand, moulding clays, binders, pins, nails;
- auxiliary necessary materials to normal working of firm, tools, fuels, spare parts to machines and devices, exploitive materials, office supplies etc. [1]

The planning of applications of foundries of materials one can lean on three basic kinds of the demand:

- primitive, with notified by the external market, It refers orderings on ready casts - secondary, with referring mostly to needs of materials, warranting the production up to the mark with satisfying the demand original; this will be raw materials, semi-manufactured goods, parts, etc.,
- supplementary, embracing all remaining categories of needs materials the firm, for example this will be auxiliary materials , tools, the energy, the transportation and etc. [2].

The connection of demand with the supply of materials represented on fig. 2.

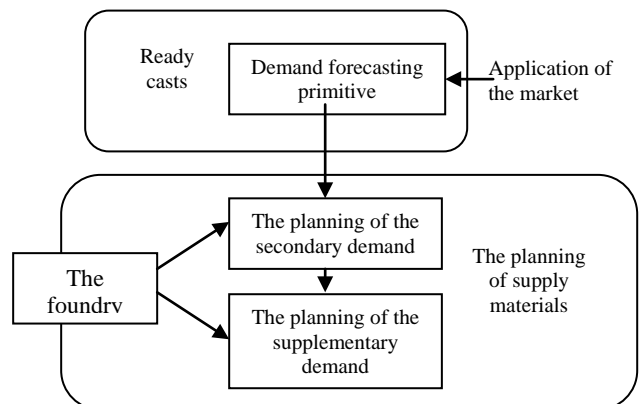


Fig. 2. The connection of demand with the supply of materials

At present increasingly of the attention sacrifices himself the integration of flows of materials, inquiry and financial in the area of the supply and the all firm. One can speak about integrated planning of deliveries of materials with taking into account the dynamics. A creature of this method of planning is the offsetting of marginal costs of the waste of materials and holdings of wrestling and realizations of deliveries.

5. The organization of the flow materials by the magazine

To the organization of the process accumulation and the flow of materials in foundries one can use the system- approach. The system of storing one can treat as the course of the act, to begin from *enter* warehouse-, and having finished on their *exits*. The course of the process is each time relative to realized endeavour of productive, accepted solutions organizational, the accessible infrastructure and methods of administering [4].

In consideration of basic acts realized in magazine (the storage and the displacement) one can execute the following partition on concrete zones:

- the zone of acceptances - SP,
- the zone of warehousing - SS,
- the zone of editions - SW.

The zone of acceptances (SP) embraces givings connected with the reception of requisite materials exercible of casts from tradesmen (eg. the point of the purchasing centre of the scrap-metal) and with the preparation their to storing.

The zone of warehousing (SS) serves to temporary keeping of materials which are taken over magazine and warehoused severally. The infrastructure is created by the basic surface warehouse- making possible the proper storage.

The zone of extractions (SW) contains the area, where material is translocated. The infrastructure is created by places of warehouse- editions

Generally one differentiates following manners organization of the flow of goods by magazine:

- the simple flow ,
- the flow in the shape of letter U,
- the flow in the shape of upturned letter T.

The simple practical **flow** is in the situation, when zones of parties (SP) and editions (SW) are found after adverse parties of magazine.

The flow of materials in the shape of the upturned letter T one characterizes this that zones SP and SW are found homolateral of the warehouse- object. Emitted are however separate zones of warehousing for materials of often practical in the foundry as sand, moulding clays, binders and remaining materials - seldom practical.

The scheme of the simple flow of materials represented on fig. 3.

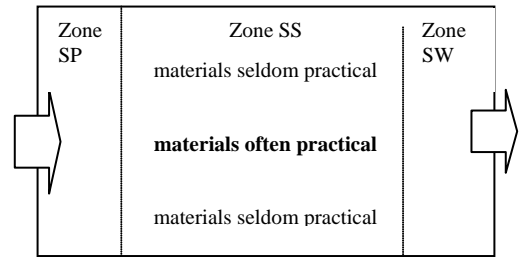


Fig. 3. The scheme of the simple flow of materials

Organizing of such flow of materials is useful then, when at accepting and to giving happens the necessity of using of different transportances [5]. A defect of such dissolving are instead limited expendability magazine.

The flow in the shape of the letter U appears then, when the zone of parties (SP) and editions (SW) is found on one hand of the warehouse- object.

This manner of the flow of materials assures the better utilization of the infrastructure. [5].

The scheme of the flow materials in the shape of letter U represented on fig. 4.

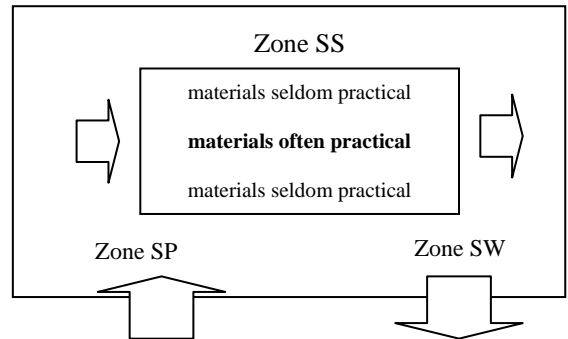


Fig. 4. The scheme of the flow materials in the shape of letter U

The scheme of the flow materials in the shape of upturned letter T represented on fig. 5.

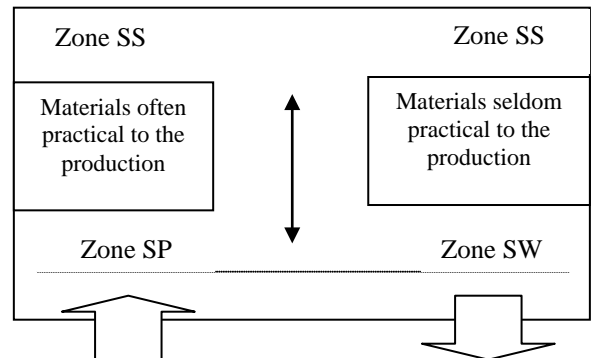


Fig. 5. The scheme of the flow of materials in the shape of upturned letter T

An unprofitable feature of such system the magazine is the possibility of appearing „of the bottle-neck” in the situation of grown more intense flow of materials after the enlargement of the production.

Summary

Modern systems of production practical in the casting-industry demand permissive analyses to improve each endeavour, servants to the improvement of quality produced casts and to adapting of operating costs to the permissive level efficiently to rival on the market.

Introducing elaboration one ought to treat as initial considerations to further, extended already analyses of each analysed problems. This will be an object of following publications.

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