



The Discovery in The Process of Quality Management System Outsourcing

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Abstract. According to the requirements of quality management system, combined with the problems found in the process of external cooperation of units, this paper briefly analyzes the causes of the problems, and discusses the ideas of external cooperation process from three aspects: correct understanding, scientific planning and effective control. It summarizes the importance of replacing external cooperation units in the process of external cooperation, and proposes that penetrating management should be carried out to promote the development of quality work.

Keywords: Quality management system outsourcing process penetrative management

1 Introduction

China's 44th National Quality month, Ship group to "fine management ability, complement the weak board strong quality" as the theme of the quality month, further deeply realized that quality is the lifeline of enterprises, enterprises must have moral quality, quality is the cornerstone of our survival and development, strengthen the control of outsourcing process to carry out penetrating management, to promote the quality management of the contractor unit It is of great practical significance to reduce the operational risks brought about by the outsourcing process of the contracting unit^[1].

2 The Concept and Significance of Penetrating Management

Penetrating management refers to an organization's efforts to strengthen control and guidance over the branches of its subordinate organizations^{[2][3]}. Departments or customers implement a combination of direct management and indirect management of a management model. This management mode is applicable to outsourcing process management. The specific outsourcing process is directly organized and implemented by the contractor. Generally, outside the production scope of the organization, the outsourcing party produces and supplies the products according to the raw materials, drawings, inspection specifications and acceptance criteria provided by the organization.

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The literal meaning of outsourcing can be understood as cooperation by the external part, its direct process is controlled by the organization, generally in the production scope of the organization, according to the requirements of the organization or under the supervision of the organization to carry out operations and services, and by the organization acceptance^{[4][5]}.

3 Case Overview

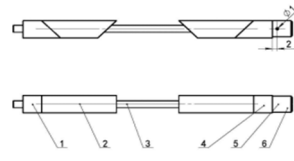
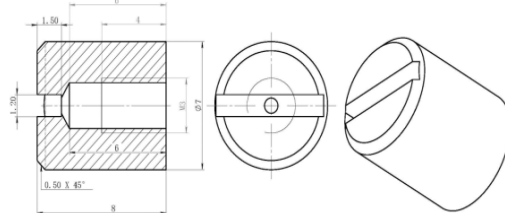



The article takes a quality system outsourcing process as an example to expand the illustration. According to the regulations of the outsourcing unit, all the outsourcing partners must be included in the list of qualified suppliers, and the implementation department of the outsourcing unit should select and determine the outsourcing unit according to the Qualified Supplier Management Procedure. The foreign cooperative unit must be selected in the Qualified Supplier List. When the qualified supplier cannot meet the requirements of the implementing department, the selection scope can be expanded. The foreign cooperative unit that meets the management regulations can be included in the Temporary Qualified Supplier List, and the temporary qualified supplier can be evaluated.

This outsourcing considers cost accounting and carries out price comparison among four suppliers: XXXX sea Industry Technology Co., LTD., XXXX Machinery Industry Co., LTD., XXXX Composite Material Products Co., LTD., XXXX Marine Equipment Co., LTD., four units are in my unit qualified suppliers list, according to the amount of the association set up a review group, the review group by the department leader, quality division, branch discipline inspection committee, subject person in charge, researchers and cooperation supporting Content related professional personnel, through the group to negotiate the price, compare the price, the final XXXX Marine equipment Co., Ltd. offer the lowest, XXXX Marine equipment Co., Ltd. is an external cooperation unit. The outsourcing unit found the following problems when doing the sample stage:

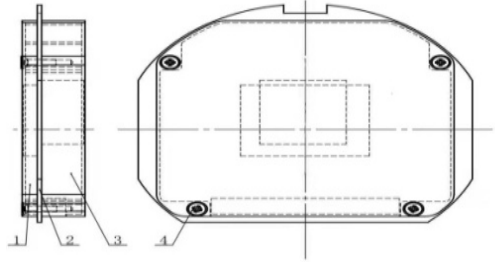
1. According to the requirements of the drawing, the material of the thread straight ladder block of the component is 304, and the material of the thread straight ladder block of the actual received part is 60610.
2. There are a number of obvious scratches on the surface of the assembly body of the electronic cabin, and some car marks are not processed in the drawing.
3. The rear connecting plate is installed in reverse.
4. The screws cannot be installed when the front vertical plate, neutral plate and rear vertical plate are assembled.
5. The level of the screw hole of the reverse shielding box of the receiving control board is irregular.
- 6, according to the requirements of the drawings, all the parts of the assembly material 6061 are oxidized on the surface. In actual processing, all parts with 6061 material are not oxidized on the surface.

Table 1 shows sample questions for the following problems.

Table 1. Sample quality problems

<p>1. According to the requirements of the drawing, the block and the tensioning bolt are installed with $\Phi 1$mm holes, connected through $\Phi 1 \times 5$ connection pins, and riveted firmly, the actual delivery of the block without drilling.</p>	 <p>The drawing shows two views of a bolt and a block. The top view is a perspective view of a bolt with a hexagonal head and a threaded section. The bottom view is a side view of a block with a hole. The hole is labeled with '1' and '2'. The bolt is labeled with '3', '4', '5', and '6'.</p>
<p>2. According to the requirements of the drawing, the block diameter of the circuit board clamping device is $\Phi 7$mm, and the actual received block diameter is $\Phi 8$mm.</p>	 <p>The drawing shows three views of a block and a clamping device. The top view is a cross-section of the block, showing a diameter of $\Phi 7$mm and a length of 8mm. The middle view is a top view of the block, showing a diameter of $\Phi 7$mm and a length of 8mm. The bottom view is a perspective view of the clamping device, showing a diameter of $\Phi 8$mm and a length of 8mm. The block is labeled with '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100'.</p>
<p>3. The through hole straight ladder block, isosceles trapezoid block and threaded connection block of the circuit plate clamping device are not centered in the drilling position, burrs on the drilling edge, irregular appearance of the parts, etc., which does not conform to the requirements of the drawing.</p>	 <p>The photograph shows two small metal blocks, one with a square hole and one with a circular hole. They are placed on a light-colored surface.</p>
<p>4. The surface of the rear force plate has grooves for non-drawing processing content.</p>	 <p>The photograph shows a rear force plate with a green surface and a blue surface. It has a groove on the surface.</p>
<p>5. According to the requirements of the drawing, the diameter of the installation hole of the front vertical plate should be $\Phi 8.2$mm, but the actual installation hole of the front vertical plate is lower than $\Phi 8.0$mm.</p>	 <p>The photograph shows a front vertical plate with a hole. The hole is smaller than the required diameter.</p>

6. According to the drawing requirements, the shielding box assembly is equipped with M4X16 cross slot countersunk screw, but the actual cross slot countersunk screw is M4X12.



4 Cause Analysis

Out of cost control, the unit gives priority to the outsourcing unit with a low price, but it has not done enough research on the outsourcing unit and cannot rely on it.

According to the processing situation of other products, no professional staff went to the factory to investigate, verify the processing capacity, personnel capacity, whether the task can be completed on time, did not consider the stability and sustainability of subsequent processing, and did not carry out risk assessment. The focus of outsourcing process control is process quality. Only when the process is effectively controlled and the output of the process can stably meet the specified requirements, can the purpose of outsourcing process control be truly realized.

5 Improvement Measures and Suggestions

1. In the process, unified standard integration process, improve the mutual recognition of results. Outsourcing of customer attention should be approved by both the organization and the customer." Patience to strengthen communication with external units, patience to communicate effectively with factory processing personnel, explain drawings or technical requirements, explain the problem clearly, and eliminate misunderstandings or loopholes in understanding. The work carried out in strict accordance with the standard requirements can effectively promote the effective implementation of the standard requirements. The outsourcing process is a process that is required by the quality management system identified by the organization and entrusted to the outsourcing party to complete, which may include the process in the realization of products and services and other management processes. It is an indispensable part of the organization's quality management system. Any outsourcing process involved in the realization of products and services should be identified and cannot be declared "not applicable". Since the outsourcing process is only the quality of products and services and the legal responsibility is not transferred, the organization should bear the ultimate responsibility for the realization of the outsourcing process.

2 Strengthen the understanding of outsourcing risks, train the project team on the concept of risk prevention, and adhere to the concept of risk prevention. It is proposed to realize the transformation from "post-check" to "pre-prevention", and promote the

overall level of quality management from "inspection check" to "system assurance" transformation and upgrading. In risk control, the safety risk management of raw materials, spare parts and spare parts is mainly to carry out risk assessment on the quality of raw materials, spare parts and spare parts, and control the risks caused by unqualified raw materials and spare parts. In particular, the use of new materials and new equipment should be more risk assessment, and blind use is prohibited. Therefore, the risk control of the project should be carried out. From the organizational level and process level, the risk should be identified, analyzed, assessed, dealt with and improved, countermeasures should be formulated, risks should be avoided or reduced to controllable range, and the system and effectiveness should be continuously improved. As an important component of an organization's business process, the outsourcing process will have an impact on the conformity of the organization's final products and services. In addition, the outsourcing process cannot exempt the organization from the responsibility to meet the requirements of customers and laws and regulations, so it cannot be deleted. At the same time, the outsourcing process should be correctly identified to ensure its effective control.

3 Organize quality training to understand the characteristics of outsourcing process. Scientifically plan the outsourcing process and clarify the type and degree of control. You can also refer to 8.4 requirements of the GJB9001C standard to adopt appropriate type and degree of control. For example, communicate with the outsourcing party, clarify the responsibilities of each party and the coordination and handling requirements of related issues, verify the results of the outsourcing process, and monitor the important outsourcing on site. In identifying the outsourcing process, it is appropriate to combine the characteristics of the outsourcing process, including but not limited to: compatible with the quality management system, responsible for the outsourcing process, control risk increase, and service attributes. Focus on the organization's control and monitoring evidence of external supplier personnel qualifications, capabilities, qualifications and performance.

6 Conclusions

In the process of outsourcing, the relationship between price and quality, for a long period of time, many units only pay attention to the price, the price is down, but the supply problems are endless, often can not deliver products on time, delay the production schedule, quality problems are also occurring, affecting the delivery of products, thus bringing greater comprehensive costs. However, we can not blindly pursue quality, "member units are the main body of the market, out of cost control to talk about the quality of procurement" must be water without a source, we must grasp the balance between price and quality, focus on the whole life cycle of the lowest total cost of procurement, based on the "overall benefit of the best" concept to promote work.

Through the construction of a full-level penetrative supplier quality management model, the weak links of supplier quality control are sorted out and analyzed, and the problems such as inadequate transmission of quality management requirements and

imprecise process control are effectively solved, so as to improve the control ability and help the ship.

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