

## **08 Production and Technology**

### **01 Organization and management of production division**

#### **01 Characteristic of production division**

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###### **01 What is the characteristic property of your production division? Dose it appear in the organization and department composition?**

Y After checking the type of production(order production type, forecasting production type, various type of products with small quantity, reasonable kinds and quantity, both in-house and outdoor production), please identify if the characteristic of the production division appears in its organization.

N There must be an organization to make people work vividly throughout the suppliers and distributors as well as in-house organizations.

#### **02 Organization of production division**

##### **01 Organization of production division**

###### **01 Is the chart of your organization, which is neat and systematic, displayed in the factory?**

Y Check that the organization chart is visibly displayed together with various workshop information on the notice board.

N The workshop information, by which every worker can clearly recognize his position in the factory, is valuable.

#### **03 Flexibility of production capability**

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###### **01 Restraining the inventory assets to the minimum, do you secure and improve your production flexibility to cope with the market requirements?**

Y Confirm that the factory is endeavoring not only standardization of materials and parts, and simplification of manufacturing process, but also diversification of final assembly lines flexibly to cope with various customer needs.

N Flexible and elastic production system means the production process under visible management which enables high productivity, single set-up change, short material handling flow, and well synchronized line balance.

#### **04 Duties of factory operation manager**

##### **01 Duties of factory operation manager**

###### **01 Is the factory manager's job and responsibility well defined?**

Y Check whether his job and responsibility described clearly not only as a person in charge of whole factory operation but as a man to have relations with environment, neighboring society, and suppliers.

N Recommend to describe the duty, responsibility and authority in written form.

###### **02 Is the factory manager participating in corporate level management policy making and decision planning?**

Y Confirm that the corporate level management policy and target are well reflected in his factory's policy and target.

N The headquarter staff are so remote from the factories that they are apt to pay little attention to environment, neighboring society and suppliers.

###### **03 Is the factory manager capable in management?**

Y Ask them what are his excellent points?

N What are his insufficient points to be improved?

###### **04 Is the factory manager trying to improve his management ability?**

Y A factory manager is required to be able to overview his factory from the view point of the whole enterprise.

N In order to improve his insufficient points, there are two ways, by self-endeavor and through corporate prepared curriculum.

###### **05 Is there any job where management improvement hasn't promoted, by leaving the workers as they like?**

Y We are afraid that the job needs a helper to assist the manager, as it becomes a bottle neck of improvement.

N Please illustrate the recent case of improvement which was initiated by the manager and which seems to be the most important and effective case among whole improvements.

## **05 Management of meetings and committees.**

### **01 Management of meetings and committees**

#### **01 Are meeting and committee systems enacted and managed adequately?**

Y Check the recent cases whose contents are adequate and operated based on PDCA (plan, do, check, action).

N Pick up a case whose issue is better to be adopted and decided through a meeting. It is the worst case that no one is active in the proposed issue.

#### **02 The name, participating members, objectives, date, time and frequency of meeting are made clear, and minutes of the meeting are distributed soon?**

Y Confirm that the meeting is held efficiently.

N Recommend to take a "lesson" to operate a meeting efficiently and effectively.

## **02 Improving management style**

### **01 Factory policy**

#### **01 Factory policy**

##### **01 Does the factory manager indicate the policy and target for the year concretely and clearly, and make it understand fully to the employees and the cooperating subcontractors?**

Y Confirm that the factory manager's policy and target of the year is well reflected both in production section and cooperating subcontractors.

N Without making the policy fully understand among the people concerned, it is impossible for the factory to take unanimous activities (in case of emergency, for example).

### **02 Factory management plan**

#### **01 Factory management plan**

##### **01 Is the factory management plan made with high motivation, based on the consistency between the actual market conditions and the factory important policy, and is it actively promoted?**

Y Confirm that the plan is more emphasizing factory value added and profit rather than quantity output.

N Recommend to start reducing product inventory, process inventory and defects with careful attention.

### **03 Practicing management style improvement**

#### **01 Practicing management style improvement**

##### **01 Do you practice management style improvement?**

Y Confirm what kind of arrangements are employed, for example the personnel reinforcement and fostering, equipment modernization, saving labor, strengthening research and development, improvement of control system, and so on

N Decide what is the most important and effective to do. And then actually work on it.

##### **02 To increase profit, have you ever executed any structure-building of factory management and the effort of employee education?**

Y Explain the effect of the structure-building concretely.

N Try education for factory managers. Why not consulting with the professionals.

## **03 Production planning**

### **01 Actual conditions of production planning**

#### **01 Actual conditions of production planning**

##### **01 Is the production planning being carried out with good balance of the long, medium and short schedule?**

Y Confirm that the way of good communication with material department, purchase department, distribution department and outside suppliers, minimizing the inventory is well considered.

N Let them understand the meaning of the long, medium and short schedule plan enough, (to cope with the adjustment of short time delivery by the request from sales department, and the lead time shortening improvement from the production side are very

important.)

**02 Do you plan and control the production schedule, carefully thinking of production capacity?**

Y Confirm that the requests from the sales department are well taken into consideration though the averaged volume production is essentially more efficient.

N The production structure must be modified to efficiently realize small quantity production of various kinds, so as to meet with the market needs.

**02 Production planning and its execution**

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**01 Is the monthly production schedule established?**

Y It must be kept within small adjustment with good timing, under the cooperation of the department concerned, design, purchasing and outsourcing, as the schedule should follow the requests from the sales side.

N Please arrange planning data and establish a regular practice to make a monthly schedule.

**02 Are the materials necessary for the planning prepared and do the people in charge of the related sections participate in the planning?**

Y Confirm the level of inventory is low as a result of smooth execution of the planning.

N Recommend to find out some improvement points to reduce the inventory and tackle them.

**03 Isn't the production schedule in trouble, due to a forced urgent schedule change initiated by the design, purchase and/or outsourcing department?**

Y Let 's prepare the back up system to prevent harmful repetition.

N A possibility for the much quicker delivery should be challenged.

**04 Process management**

**01 Planning stage**

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**01 Are the process ability and allowance adequately grasped?**

**Is a standard daily schedule sheet made properly?**

Y Check the latest record by the date of issue.

N They are the essential standard numerical figures to build up the plan.

**02 Is the preparation period of raw material, important parts and jigs with tools secured? And have the ordering system and the safety stock volume already been decided?**

Y Check the accuracy of the lead time standard of procurement by measuring occurrence of the unnecessary goods generated during switching from the old model to the new?

N You must prepare the basic rule and data of the ordering system first, and level them up gradually in the operation.

**03 Are the standards such as operation time, working time, set up time and machining time prepared already?**

Y Review the daily production record, where the standard value and actual value are recorded and some comments are on the big differences.

N Explain that they are standard numerical value for establishing any planning and finding points to improve.

**04 Does the production sometimes get confused by hard requirements from the sales side?**

Y Insufficient information, urgent rush orders, customer oriented special orders, specification changes after the order acceptance, and so on should be classified and their countermeasures should be examined.

N There is a possibility, though the problems are apt to be skillfully handled at the production site, the facts are not reported to the management. Check all of them elaborately in the daily work report and the like.

**05 Is the "production order sheet" published?**

Y Check if the manufacturing number, the construction order number, the part code and the drawing number are all managed uniformly under the numbering system.

N Promote to make a rule easy to understand for the workers and execute it as a basic important matter. Any short or excessive inventory may be generated due to the schedule.

**02 Progress management**

## **01 Progress management**

### **01 Can you recognize where is the particular manufacturing number, using the progress chart (for example, graph-type) or the progress control board?**

Y Please explain the actual progressing status using the board.

N As a basic control in the factory, the actual progress conditions should be clear and visible in terms of both in process and in quantity.

### **02 Can you easily judge actual causes and levels of the process troubles whenever a production schedule delay occurs?**

Y Make sure that troubles can be grasped in the production flow visibly.

N Make a device which is easy for the operation manager to be grasped, for example, a stop of the whole production process in case of having a bad product.

### **03 Is the progress delay report submitted quickly with necessary information? And is the frequency tabulated monthly being classified by the trouble causes?**

Y Confirm that the countermeasures have been made, after considering the influence and the frequency of the delay.

N As a manager, the fact confirmation of the delay and the recognition of the seriousness should be instructed to the related people in a meeting.

### **04 How do you confirm the differences between the production plan and its actual result and do you improve them?**

Y When the differences is big, check whether the production is dull in the middle of the month and becomes active towards the end of month.

N When the difference between the plan and its actual result is small, confirm progress plan and actual result management from the viewpoint of the production control.

## **03 Excess capacity management**

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#### **01 Have you decided how to investigate excess capacity and how to adjust it to proper quantity?**

Y Confirm that the excess capacity of equipment and human resources is so measured that every worker is willing to utilize the excess when necessary.

N In order to utilize the excess capacity, earlier periodical maintenance or operation training for workers are recommended to plan.

## **04 Results record management**

### **01 Results record management**

#### **01 As for various kinds of actual result data necessary for production planning, are they accurately recorded everyday?**

Y Confirm that every daily record is recorded, accumulated and sent back to the planning section and to the section in charge of improvement.

N We must instruct the importance of reflecting the actual results of today to the plan of tomorrow, thus the circle of PDCA can be rotating.

#### **02 Are both a production report and an operation report daily submitted with necessary description?**

Y Make sure that everyday report is recorded properly and input to PC at site.

N A problem in a day must be solved within the day and do not put it off till tomorrow. Make it a rule and a habit of the whole organization.

#### **03 Are the actual result data or the original data reported to the right section?**

Y The official reporting address and the address for reference should be classified.

N If the actual result data being not distributed to a right person, how come?

#### **04 Are the reported materials fully utilized? Aren't the unnecessary data collected?**

Y Check whether necessary items of data, frequency and address are reviewed periodically.

N Let 's put a price on the reported data. The section who utilizes those data might determine the range and frequency they need, as minimum as possible.

## **05 Organization of process management**

### **01 Organization of process management**

#### **01 Are the assignment and its responsibility of process control management so clearly described that the management can enjoy a smooth cooperation with the production people?**

Y Confirm that production and material handling are well synchronized, because who is

to take care of the process inventory being clear,

N As any trouble may happen where responsibility is not clear, let them understand that the assisting role of control staff is important.

**02 The computerization of office work has been so progressed that any paper work at the working site is eliminated?**

Y Just confirm that any data are input to the computer at the production site.

N Starting from preliminary work like result summation and its report, you may plan to proceed to computerization and mechanization?

**03 Is the process control meeting held periodically? Is every problem discussed at each meeting to reach conclusions and to report to the related groups soon?**

Y Any office information and documents should be distributed by intra-net so that the meeting shall be held less frequently.

N It should be a factory rule to make the purpose of the meeting clear, to distribute the summary of what is decided to the related sections, and to follow how the decision is executed.

**05 Operation management**

**01 Operation management**

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**01 Is your factory operation standardized? (Is it in written form and is it well known to every worker?)**

Y Please explain your operation standard. (Standard operation time, specification of materials, jigs/tools, working conditions, how to review your operation standard, etc)

N If not standardized, quality, productivity and so on are all dependent on each worker's option and the results may be random and fluctuated without control.

**02 Do all the workers daily record their results such as working hours, quantity of materials used, quantity of production, various operation conditions and so on?**

Y Check the recorded items and contents, such as the working time, the materials used, the amount of production, working conditions, etc. and their follow-up.

N Without records, which you accomplished today, the management circle of PDCA does not work properly.

**03 All of your workers respect and follow your operation manual? (Is anything left to the worker's option?)**

Y Confirm that the manager periodically checks the operation by the operation standard and QC process chart.

N If the instruction being poor, quality and productivity are so dependent on each worker's option that the output are random and fluctuated without control. The systematization of OJT (on the job training) is needed for the purpose of succession of the working skill.

**04 Is every operation actively improved? (improvement of production system such as from manual to mechanization and to automation; and moreover shortening of transportation distance, etc.)**

Y Please explain the improvement planning and results of target. (Check the followings: system improvement, mechanization, automation, and shortening material handling distance, as well as devices to promote them such as commendation)

N Any enterprise cannot develop the competitive power without every day effort to improve their production system.

**06 Inspection and quality management**

**01 Inspection and quality management**

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**01 Have you established inspection standards and an inspection system which is adequate to your process?**

Y Evaluate the inspection system and standards of the important processes, including supplier's process for the parts and materials.

N Any poor quality will lose the reputation from the clients.

**02 In appearance inspection process, aren't there any cases where an inspector may evaluate the product by his own judgment?**

Y Which items are they? Do they badly influence to the quality and production?

N It is important to evaluate all the items in numerical value as far as possible, and not to insert any individual subjectivity in the judgment.

**03 Are the records of inspection and the control of defects made adequately?**

Y Analyze the records, and confirm any effective measures of improvement have been adopted.

N The inspection records are important for traceability, quality improvement, countermeasure for defects, process improvement, and the like.

**04 Do you conduct any education and instruction to the inspectors?**

Y Check the education method and its contents of various kinds of inspection on quality, quantity, random, concentration, and round-about.

N The inspection is needed to guarantee the quality and cost to the following process.

**05 Do you examine the defect rate of each product item and of each process?**

Y Check the main defect causes and their countermeasures. (Explain 7 tools of quality control method, 7 tools of new quality control method, etc, if necessary.)

N The examination of defects is very helpful to pick up problems and improve the process.

**06 Is the inspection of purchased products and products ordered from outside properly exercised?**

Y Please explain the inspection method.

N As the purchased materials and parts are so influential to the delivery, quality and cost, it is recommended to conclude an agreement on quality with suppliers.

**07 Do you manage to control the inspection appliance and jig?**

Y Please explain how to approve and authorize the accuracy of the inspection appliance and jig.

N Explain that you can not get the good evaluation and high confidence from your clients without proper tool management, because it is a basis of quality control.

**07 Cost management**

**01 Computing profitability**

**01 Break even point ratio of labor cost**

**01 Do you grasp the break even point ratio of labor cost (internal expense / total man-hour X direct labor attendance ratio= additional value added per unit hour at the break-even point)?**

Y Do you apply the analysis result for judgment of profitability of each product?

N The ratio is effective for setting a target of cost reduction and improvement.

**02 Do you regularly calculate profitability of each product?**

Y Confirm if they analyze the cost difference between the individual cost target and its result.

N It is necessary to measure the working hour first(either man hour or machine hour), which is the basis of cost computation.

**02 Cost management organization**

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**01 Each cost management section clearly understands their responsibility and what to do?**

Y Please explain the management system and its activities.

N It is necessary for the basic enterprise management to create a system where all cost information is gathered to one particular section.

**02 Does the planning section establish a standard cost or target cost, corresponding to the production plan?**

Y Please explain how different is between the target cost and the actual cost.

N The management will be out of control without a target.

**03 How cost conscious are the designing and purchasing department? Aren't there any instances where they are so busy to keep the appointed date of delivery that they**

**are apt to neglect cost management?**

Y Listen to the explanation who decides the cost target and measures to reduce cost and who follows the cost reduction process.

N As these two departments are most useful and powerful in cost reduction, ask them their full and active cooperation.

**04 How cost conscious are the operation managers? Isn't their management priority biased?**

Y Please explain the cost reduction consciousness of the operation managers. (Check whether they pay the closest attention to man-hour reduction, inventory reduction, measures against defects, keeping the production schedule and other cost reduction sources such as yield, processing material unit, production efficiency and working rate of equipment, which are aspects of cost performance and are grasped only at the production site.)

N It is necessary to let the manager have keen cost consciousness.

**05 Is "the cost audit" regularly conducted? Who analyze the cost difference between planning and actual? Who is responsible to cost?**

Y Please explain how the audit has been executed and what the result was.

N If audit being not conducted, an evaluation by the third party may be necessary and effective.

**03 Office system of cost management**

**01 Manufacturing instruction card**

**01 Is a manufacturing instruction card, which is the basis for cost management, issued product by product and lot by lot?**

Y Listen to the explanation of the contents of a manufacturing instruction card and the actual condition of cost management. (Check whether the required amount of production and production time, and a target cost per product, in which yield value, efficiency, unit requirement and operation rate are included, are listed.)

N A manufacturing instruction card has basic data necessary to grasp exact cost information.

**02 Operation slip**

**01 Are you using an operation slip which indicates standard time?**

Y Please explain the operation slip and method of grasping the production cost. (Check whether standard time and standard of production efficiency, yield, unit requirement, the rate of machine operation, including setup change time and repair time are clearly indicated and the result can be compared with the standard.)

N These data are so useful for the production management that the data analysis devotes to create the measure of the improvement, cost reduction, etc.

**03 Material shipping slip**

**01 Do you make use of a material shipping slip? Isn't it freely published by operators?**

Y Confirm the material shipping slip in use is issued by the warehouse keeper.

N Insufficient inventory control caused by a free issue of the material shipping slip will result the run-out stock or excess inventory. Explain that the inventory management is important from the view point of tax survey. It is necessary to make a rule of handling the material delivery from the warehouse keeper to the production division.

**04 Executing cost management**

**01 Executing cost management**

**01 Do you conduct a cost estimation of all the items on the blueprint base and do you make any design changes in order to realize cost reduction?**

Y Please explain the method of cost estimation, the result of cost reduction and the target of the cost reduction

N The designing is the most important division to realize cost reduction. (Reviewing specification and material, standardization, multi-purposed parts, reduction of parts number and reflecting opinions of the production division are important factors to reduce the cost.)

**02 Are the actual cost data accumulated and maintained in the designing department?**

Y Check what kind of cost data they have.

N It is necessary for the designing section to be always ready to study and examine cost reduction.

**03 Are you conducting VE (value evaluation) in which the designing department takes an active role?**

Y Listen to the explanation on the present situation of value engineering activity. Is the cost reduction target indicated by the top management?

N The value engineering activity is a very powerful method to realize cost reduction.

**04 Are you conducting the designing of production lines in order to improve cost and productivity?**

Y Please explain the target and the results at present.

N It is essential to reflect the knowledge and know-how of the production division, from the view points of equipment ability, processing, assembly and so on, to the production line designing.

**05 Are you aiming at GT (group technology) by conducting standardization of designing and unification of materials and parts?**

Y Listen to the explanation on the recent movement of their technology.

N Standardization and unification of designing are effective to improve cost reduction, productivity, the inventory reduction, delivery time, etc.

**02 Procurement Cost Management**

**01 Are you exercising an adequate inventory control system for regular materials, preventing running out of stock and decreasing stock quantity ?**

Y Please explain the names of the regular materials and their inventory management system. Check whether the planning section intensively communicates with the purchasing division especially at the time of product change.

N In order not to disturb production activity to prevent from running out of stock, and in order to realize cost reduction, an adequate inventory system is needed.

**02 Are you researching cost reduction by proper way of order lot, contract method, payment terms and so on?**

Y Please explain the ordering method, the terms and conditions of ordering, and the cost reduction target and its result of major materials and parts. Do you adopt the JIT system?

N The ordering terms and conditions will influence largely to cost and delivery.

**03 Do you control the ordering price, based on the budget, acceptable cost or standard cost?**

Y Please explain how to make the decision of budget, acceptable cost, and standard cost. And also explain what the difference between the target and the result is.

N The results can not be evaluated without budget and target. They are necessary for the control.

**04 By employing multiple suppliers system and comparing their estimates, are you executing cost reduction through competitors?**

Y Check whether they monitor the daily market price movement of commodities they use.

N Competition is effective for cost reduction (A central purchasing or a unification of procurement will be useful for making purchasing management efficient and improved in a certain management environment.)

**05 Are you maintaining the price estimation tools (=cost table)?**

Y Check how frequently the cost table is used by each purchasing item.

N Please start preparing the cost table by accumulating data.

**06 Are you comparing outsourcing processing expenses and in-house processing costs?**

Y Please explain the concrete result comparing between in-house production and outdoor production. (Also check the allocation method of fixed costs, the major points of production costs and the decision-making method of outsourcing policy.)

N It is important to study in-house production and outsourcing production from various viewpoints, such as operating situation, allocation of fixed costs, investment in equipment, subcontracting policy and so on.

**03 Operation cost management**

**01 Do you indicate the result of operation improvement in terms of money?**

- Y Check that operation management and cost management are not segregated at production site, by way of the smooth feedback of information of how the cost is improved.
- N To assess the results in terms of money makes the effect so clear that the production managers will be motivated to be more cost conscious.

**02 Do you establish a standard amount of money for the equipment investment for rationalization?**

- Y Please explain the standard. (The standard should be reexamined in the middle terms, as the management environments such as interest rates, the impact of labor cost and fixed costs to the management, and the life cycle of products could fluctuate.)
- N Both the investment amount for equipment and “payback period” are common standards for the corporate level judgment.

**08 Conditions of working place**

**01 Conditions of working place**

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**01 Are you maintaining an adequate level of the working place conditions? (air conditioning, lighting, protection from noise, preventing gas and dust, safety and accident measures)**

- Y Ask detailed explanation on the standard of the working conditions how to maintain them and how to adopt employee’s proposals.
- N To maintain the working conditions is closely related with labor productivity, in addition to keeping quality and observing the safety laws. (Arrangement/ordering: fixed storage area and passages, shelves and containers, height of working tables and location of materials and tools are to be carefully considered.)

**02 Promotion of 5S**

**01 Arrangement, Ordering, Cleaning, Cleanliness, Discipline (in Japanese, Seiri, Seiton, Seisou, Seiketu, and Shituke)**

**01 Does the operation manager himself take the initiative role of promoting 5S and does he thoroughly exercise 5S?**

- Y Please explain the method of promotion and its level at present.
- N 5S is the bases of entire job improvements, where process inventory reduction, working improvement, discovery of equipment defects, job rationalization, schedule modification, no defects are included.

**02 Does the top management have high motivation to carry them out?**

- Y What kind of indication does the top management direct?
- N In order to materialize the 5S, the leadership of the top management is essential. (It is necessary that the whole organization initiates action to promote the campaign under the leadership of top management.)

**03 Do you have any automated alarm mechanism and/or any visible control system against the abnormal situation?**

- Y Please explain the actual cases.
- N Alarm system and/or visible control will be the basis of the discovery of problems and mistakes. (Identification of defective parts, disused parts, inventory and stock in process; first-in first-out of stock, and easiness to take out parts and tools are good examples of visible control.)

**04 Are “the small group activities” at the operation site active?**

- Y Make sure that the results of small group activities are demonstrated on the notice board.
- N The small group activities will be the basis of improvement (=Kaizen) by way of making problems tangible, and promoting the workers’ motivation.

**09 Equipment management**

**01 Equipment and tools management**

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**01 Is the equipment planning constructed on the basis of product life-cycle?**

Y Confirm every equipment planning is flexibly constructed according to the life-cycle.

N Flexible equipment planning is one of the keys to strengthen the competitive power and to enforce financial conditions of an enterprise, including subcontractors.

**02 Have you established any system of equipment maintenance?**

Y Listen to the explanation of their organization, policy and budget for equipment preventing maintenance.

N It influences a net operation rate, delivery, products accuracy and quality.

**03 Do you have an exact drawing of equipment allocation?**

Y Check the drawing how it is detailed.

N The production process flow, physical handling, production capacity, and factory future plan are necessary for improving the factory layout and for better equipment planning.

**04 Have you properly prepared a management system of usage, maintenance and storage of tools and jigs?**

Y Check whether the control system (=identification, storage, control organization, past record, and so on) is defined in written form.

N It is necessary for anyone to be able to understand the system.

**05 Is the safety standard of equipment and factory operation established ?**

Y Check whether the safety measures and environmental standards are properly prepared.

Also check whether safety patrols by the factory manager are carried out periodically

N Ensure to prepare the safety standard, because it is important not only for productivity and morale improvement, but also for observing the law.

## 10 Logistics

### 01 Logistics system strategy

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**01 Do you properly consider logistics from the view point of customer satisfaction?**

Y Confirm that "Logistics" including procurement physical distribution, production physical distribution, in-house physical distribution, vein physical distribution, and sales physical distribution are organically composed and controlled, from the view point of client satisfaction. (Propose more possible improvement methods such as CS, SCM, JIT, as a bench-mark, if their level is as high as that of the top enterprises.)

N Advise to examine the logistics system, as customers request service of delivery sometimes more than price and quality.

#### 02 Inventory management

##### 01 Inventory management

**01 Are you shifting your conception of inventory management from "inventory level management" to "flow improvement activity"?**

Y Listen to their concept of inventory management.

N By changing the cutting section of your viewpoint, some ideas for improvement management will be found. (Information from suppliers, shortening lead time, the alternatively imported product, shortening the period stocked in the warehouse, disposal of the defects inventory may give you some hints to improve your inventory management.)

**02 As the function of inventory management, are you shifting your way of thinking from "adequately stocked quantity" to "zero stock"?**

Y Just listen to their philosophy of "zero stock". And check whether their transportation cost to deliver goods to customers has not been increased in recent years.

N The promotion of the zero stock has an overall effect on the improvement of the factory and management system.

**03 Do you consider inventory management as an inseparably related activity with each process of the physical distribution activity?**

Y Please explain it with suitable examples.

N Inventory management is necessary for the efficiency of production and cost reduction, though it tends to be overlooked.

**04 Which inventory management indicator do you select as most suitable for your use, rotation ratio, rotation period, or the like?**

Y Please explain the reason why you selected it.

N The inventory indicator is useful to set the target of reducing the inventory.

**05 When you fill up the inventory management documents, are those factors like correctness, immediate correspondence, selectivity, practical effectiveness secured?**

Y Check whether the inventory method is Input-Output system and the difference between the booked record and the actual stock is recorded by products and by fixed places of inventory.

N The inventory records are an important measure for reducing defective inventory, shortage of inventory and excessive inventory.

**03 Calculation of physical distribution cost**

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**01 Do you recognize that the payment of the physical distribution expenses is just a tip of the iceberg of the total flow costs?**

Y Check whether they realize the total distribution cost is consisted of every distribution cost of procurement, production, in-house and sales.

N It is necessary to catch the total physical distribution cost.

**02 Do you recognize that the physical distribution cost is composed of the following functional expenses, such as wrapping expense, delivery expense, storage expense, loading and unloading expense, in-market processing expense ?**

Y Please explain each cost.

N It is necessary to catch the total physical distribution cost, analyzing the cost constitution and identifying individual cost.

**03 Do you recognize that the total physical distribution cost of manufacturers in average is 9% of sales amount?**

Y How much is your ratio of the physical distribution cost?

N It is necessary to catch the total physical distribution cost. The reduction of physical distribution cost has the same profit increasing effect as the large sales increase.

**04 Do you make a decision of how to distribute through the profitability analysis of distribution?**

Y Explain the result of the analysis.

N It is necessary to examine the profitability, as it is easy to be overlooked.

**11 Designing management**

**01 Designing management**

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**01 Do you understand how frequently design changes and drawing corrections are carried out and how much damage they cause to the production side?**

Y Please explain a sample which shows the management and present situation

N Any changes will affect lead time and costs before shipment.

**02 Does the designer have enough knowledge on production method, production process, and costs? Does he get enough feedback of the opinions from operations or production technology department?**

Y Confirm the designer has enough experience in the operation.

N The experience and knowledge of operation will affect much to the production and cost.

**03 Do you make a daily schedule of designing? Can you secure enough time for the designing? In case of delay, how do you manage?**

Y Make sure that the standard man-hour table, the ability coefficient of designer, the planned man-hour calculation table and the daily report are well prepared.

N To keep the design schedule is the basis of production

**04 How do you manage the drawings? Is the arrangement of drawing modifications and changes adequate and quick? Are the old drawings before the modification all collected and scrapped?**

Y Explain the management method and system of drawing.

N It affects to eliminate the idle operation and to keep reliability from clients.

**05 Have you introduced CAD (Computer-aided design)?**

Y Please explain the way of application, number of units, type of CAD, and the effect of computer-aided design.

N It will be a strong weapon for your designing.

**12 Production technology**

**01 Situation of production technology division**

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**01 Do you have staff in charge of production technology? What are the responsibility items of the production technology division?**

Y Please explain the number of engineers and the contents of responsibility in charge.

N They are essential for the improvement of costs, productivity and quality.

**02 How is the situation of your equipment modernization? Are you not left behind?**

Y Please explain NC machine (numerical control) rate, and the contents and amount of the investment for equipment in the last 5 years.

N It has a lot of influence on the competitive power such as productive and quality.

**03 Do you understand the responsibility and the corresponding capability of the people in charge of designing and creating molds, tools, and equipments? Also, do you get the information how much you utilize out-sourcing?**

Y Please explain it with a concrete example.

N The production technology is important to improve the productivity.

**04 Are you actively conducting research for the improvement of the processing method and the process?**

Y Please explain the themes and results in last 1 year.

N It is important for the improvement and the increase of productivity, such as cost reduction, man-hour reduction, production/assembly, improvement of yield, defects reduction, process improvement and so on.

**13 ISO 9000 (Quality system evaluation registration system)**

**01 Acquisition of ISO9000 certification**

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**01 With regard to the acquisition of ISO9000 certification, how do you understand its essence?**

Y Please explain the purpose of acquisition and its effect. (the client demands, the expansion of markets, the review of company' management system and its level-up)

N It is necessary to study ISO9000 for business expansion and level up of a company management system.

**14 ISO14001 (Environment management system)**

**01 Ecomanagement and environment safety**

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**01 Are you actively conducting an environment management?**

Y Explain energy saving, resources cycling, waste disposal, green procurement, product development

N It is necessary to study ISO14001 for business expansion and level up of a company management system.