

Degree in Management

Integrated Operations Management

Quality Management

Case study
 Hank Kolb

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Hank Kolb, Director of Quality Assurance

Hank Kolb was whistling as he walked toward his office, still feeling a bit like a stranger since he had been hired four weeks ago as director, quality assurance. All last week he had been away from the plant at an interesting seminar entitled “Quality in the 80s” given for quality managers of manufacturing plants by the corporate training department. He was not looking forward to really digging into the quality problems at this industrial products plant employing 1,200 people.

Kolb poked his head into the office of Mark Hamler, his immediate subordinate, the quality control manager, and asked him how things had gone last week. Hamler’s muted smile and an “Oh, fine” stopped Kolb in his tracks. He didn’t know Hamler very well and was unsure pursuing this reply any further. Kolb was still uncertain of how to start building his relationship with him because Hamler had been passed over for the promotion to Kolb’s job—Hamler’s evaluation form had stated “superb technical knowledge; managerial skills lacking.” Kolb decided to inquire a little further and asked Hamler what had happened; he replied, “Oh, just another typical quality snafu. We had a little problem on the Greasex line last week (a specialized degreasing solvent packed in a spray can for the high-technology sector). A little high pressure was found in some cans on the second shift, but a supervisor vented them so that we could ship them out. We met our delivery schedule! Because Kolb was still relatively unfamiliar with the plant and the products he asked Hamler to elaborate. Painfully, Hamler continued:

We’ve been having some trouble with the new filling equipment, and some of the cans were pressurized beyond our AQL (acceptable quality level) on a psi (pounds per square inch) rating scale.

The production rate is still 50 percent of standard, about 14 cases per shift. Mac Evans (the inspector for that line) picked it up, tagged the cases “hold” and went on about his duties. When he returned at the end the shift to write up the rejects, Wayne Simmons, first-line supervisor, was by a pallet of finished goods finishing sealing up a carton if the rejected Greasex: the reject “Hold” tags had been removed. He told Mac that he had heard about the high pressure from another inspector at coffee break, had come back, had taken off the tags, individually turned the cans upside down and vented every one of them in the rejected eight cartons. He told Mac that production planning was really pushing for the stuff, and they couldn’t delay by having it sent through the rework area. He told Mac that he would get on the operator to run the equipment right next time. Mac didn’t write it up but came in about three days ago to tell me about it. Oh, it happens every once in a while, and I told him to make sure the filling machine was adjusted; and I saw Wayne in the hall and told him that he ought to send the stuff through rework next time.

Kolb was a bit dumbfounded at this and didn’t say much—he didn’t know if this was a big deal or not. When he got to his office he thought again what Morgenthal, general manager, had said when he had hired him. He warned Kolb about the “lack of quality attitude” in the plant and said that Kolb “should try to do something about this.” He had further emphasized the quality problems in the plant. “We have to improve our quality, it’s costing us a lot of money, I’m sure of it, but I can’t prove it! Hank, you have my full support in this matter; you’re in charge of these quality problems. This downward quality-productivity-turnover spiral has to end!”

The incident had happened a week ago; the goods were probably out in the customer’s hands by now; everyone had forgotten about it (or wanted to!); and there seemed to be more pressing problems than this for Kolb to spend his time on; but this continued to nag at him. He felt like the quality department was being treated as a joke, and it also felt to him like a personal slap from manufacturing. He didn’t want to start a war with the production people but what could he

do? He was troubled enough to cancel his appointments and spend the morning talking to a few people. After a long and very tactful morning, he learned the following information:

- 1) **From personnel.** The operator for the filling equipment had just been transferred from shipping two weeks ago. He had had no formal training in this job but was being trained by Wayne, on the job, to run the equipment. When Mac had tested the high-pressure cans, the operator was nowhere to be found and had only learned of the rejected material from Wayne after the shifts were over.
- 2) **From plant maintenance.** This particular piece of automated filling equipment had been purchased two years ago for use on another product. It had been switched to the Greasex line six months ago, and maintenance had had 12 work orders during the last month for repairs or adjustments on it. The equipment had been adapted by plant maintenance for handling the lower viscosity Greasex, which it had not originally been designed for. This included designing a special filling head. There was no scheduled preventive maintenance for this equipment, and the parts for the sensitive filling head, replaced three times in the last six months, had to be made at a nearby machine stop. Non-standard downtime was running at 15 percent of actual running times.
- 3) **From purchasing.** The plastic nozzle heads for this new Greasex can, recently designed by a vendor for this new product on a rush order, were often found with slight burrs on the inside rim, and this caused some trouble in fitting the top to the can. An increase in application pressure at the filling head by maintenance adjustment had solved the burr application problem or had at least “forced” the nozzle heads on despite burrs. Purchasing said that they were going to talk to the sales representative of the nozzle head supplier about this the next time he came in.
- 4) **From product design and packaging.** The can, designed especially for Greasex, had been contoured to allow better gripping by the user. This change, instigated by marketing research, set Greasex apart from the appearance of its competitors and was seen by the designers to be “significant.” There had been no test of the effects of the contoured can on filling speed or filling hydrodynamics from a high-pressured filling head. Kolb had a hunch that the new design was acting as a venturi (carrier creating suction) when being filled, but the packaging designer thought that was unlikely.
- 5) **From manufacturing manager.** He had heard about the problem; in fact, Wayne had made a joke about it, bragging about how he beat his production quota to the other foremen and shift supervisors. Wayne was thought to be the manufacturing manager to be one of the “best foremen we have... he always gets his production out.” His promotion papers were actually on the manufacturing manager’s desk when Hank dropped by. Wayne was being “strongly considered” for the promotion to shift supervisor. The manufacturing manager, under pressure from Morganthal for cost improvements and reduced delivery times, sympathized with Kolb but said that the rework area would have vented with their pressure gauges what Wayne had done by hand. “But, I’ll speak with Wayne about the incident.”
- 6) **From marketing.** The introduction of Greasex had been rushed to beat competitors to market and to a major promotional/advertising campaign was now underway to increase consumer awareness. A deluge of orders was swamping the order-taking department right now and putting Greasex high on the back-burner list. Production had to turn the stuff out; even a little off spec was tolerable because “it would be better to have it on the shelf than not there at all. Who cares if the label is a little crooked or the stuff comes out with a little too much pressure? We need market share now in that high-tech segment.”

What bothered Kolb the most was the safety issue of the high-pressure in the cans. He had no way of knowing how much of a hazard the high pressure was or if Wayne had vented them enough to effectively reduce the hazard. The data from the can manufacturer which Mark had showed him indicated that the high pressure which the inspector had found was not in the danger area; but then again the inspector only used a sample testing procedure to reject the eight cases. Even if he could morally accept that there was no product safety hazard, could Kolb make sure that this never happened again?

Skipping lunch, Kolb sat in his office and thought about the morning’s events. Last week’s seminar had talked about “the role of quality,” “productivity and quality,” “creating a new attitude,” and the “quality challenge” but where had they told him what to do when this happens? He had left a very good job to come here because he thought the company was serious about the importance of quality, and he wanted a challenge. Kolb had demanded and received a salary equal to the manufacturing, marketing, and R&D directors and was one of the direct reports to the general manager. Yet he still didn’t know exactly what he should or shouldn’t do or even what he could or couldn’t do.

Questions

- 1) What is wrong in the way quality is managed in this company?
- 2) What should be done to improve quality management?
- 3) What should Hank Kolb do?

Source: Chase, R. B., Jacobs, F. R. and N. J. Aquilano, 2007, *Operations Management for Competitive Advantage*, 11th edition, McGraw-Hill, pp, 340-341.