Hovertec case study sv groups

Business

The superstructure or ‘ shell’, which encases the helicopter; 2. The power unit, either a turbine or piston engine, depending on application; 3. The main rotor blades and tail rotor; 4. The cockpit and passenger/crew compartment; 5.

Hydraulic systems to operate the various controls; 5. The wiring loom, which is an inter-woven collection of between 1, 200 and 2, 000 electrical cables, connecting components, systems and controls.

Although the latest technology is used in these production and assembly processes, he manufacture of a complete helicopter is a relatively slow process, taking three Knees for a civilian unit and four weeks for the larger, more sophisticated military helicopter. One ‘ bottleneck’ in the process is the long time taken to assemble the Miring loom. Assembling a wiring loom cause of the complexity of the task and the high risk of error, the assembly of each loom is normally carried out by one technician who takes up to ten working days to assemble a complete loom.

Production output is maintained by a team of 24 loom technicians who work in two shifts of 12 technicians per shift. The loom technicians are all qualified maintenance fitters who have received extensive training from the company. They are the highest-paid section of the workforce after the supervisors and management, and they receive other benefits, such as free PUPA medical insurance and additional holiday entitlement.

All of the technicians are men, aged between 36 and 50 years, with between 8 and 15 years’ service with the company. Many were recruited from either the Royal Navy or the Army Engineering Corps, Inhere they received their

basic training as maintenance fitters. This form of acquirement is adopted, firstly, because possible security risks have to be minimized on Ministry of Defense contracts.

Secondly, the majority of Hovered Pl managers possess Army or Naval backgrounds and strong links are maintained with the armed services.

All the loom technicians belong to a trade union which is recognized by the company, although in practice the Hovered Pl management frequently circumvent the union representatives by mentoring the workforce directly to changes in procedures, policy, etc. , using ‘ briefing’ procedures. An improved helicopter loom- assembly method In view of an impending recession the company expected that activity in the three factories would be at a lower level during the coming two to three years. A detailed cost-cutting exercise was introduced, with particular emphasis on the loom Northrop, and all overtime working was withdrawn.

Meanwhile, the research and development laboratories devised a radically new method of assembling looms Inch, under test conditions, reduced the assembly time to two working days. The new method had the added advantage of allowing unskilled labor to be employed. Instead of one technician assembling a single loom, by following a blueprint in a mistaking way, the new method relies upon a team of five operatives working together and following a sequence of instructions provided by a computer.

The 1200-2000 electrical cables are ‘ color coded’ in terms of the ten main helicopter operating systems. Each operative is given responsibility for two

sets of color-coded cables and is required to thread the cables of each color through the loom by following a ‘ map’ set out on a computer screen.

Further trials indicated that small groups of five female workers achieved, on average, 40 per cent higher productivity than similar teams of male operatives. The highest productivity was consistently achieved, under laboratory conditions, by a team of 16- tool 7-year-old female school-leavers.

These young women were permitted to choose their working partners and Nerve also allowed to change from one color code to another whenever they became bored or started to make errors. This team was given ten-minute ‘ rest pauses’ every hour to change color codes and was supervised by a member of the laboratory team, who also collected data on the group’s activities. Proposed changes in the loom workshop Nothing six months, a decision was taken by senior management to transfer the new enterprises system to the loom workshop on a three-months’, pilot-scheme basis.

Management informed the workforce about the proposed trials beforehand and the loom technicians were given personal assurances that no redundancies would occur as a result.

The company wrote to the trade union, during the week when the trials began, to inform them of the new situation; it also pointed out that the trials would allow full-time employment to be offered to five female school-leavers, who would otherwise be out of work. Outcome of the trials Nothing two weeks of the new system being installed, three of the five young women

ended in their notice, claiming continual abuse from, and arguments with, the loom technicians.

Productivity fell far below the expected targets on every day after the first loom was completed. The low productivity was primarily due to breakdowns of equipment (computer failure was the most frequent fault); this, according to the local managers, was the direct result of vandalism. Disciplinary action had to be taken against one loom technician.

The trade union warned the company that the men Nerve unwilling to work alongside the young women on classified defense contracts, s they were considered to be irresponsible and more of a security risk.

Management Nerve swift to point out that none of the “ girls” possessed expertise in engineering or electronic systems and, in fact, three were close relatives of different loom technicians. Output in the loom workshop continued to decline, and the company began to fall behind on outstanding defense contracts. A senior Ministry of Defense official visited the plant in England to advise senior management of the Whitehall view that the new loom assembly trials should be suspended on all defense contracts until further notice.