

Company with UNI EN ISO Certified Quality System

The title refers to the phrase which companies adopting ISO quality regulations use to inform their customers that the Company is certified. **UNI is the Italian organisation** hich implemented the regulation in Italy, **EN is the European body** whichin turn implemented the ISO standard for Europe, **whilst ISO is the regulatory body.** It should be noted that the ISO certification in question does not guarantee the utmost in terms of quality, but merely that the quality is constant. ISO is made up of technical specialists and experts sent by Universities and both public and private organisations from around the world. The active members meet once a year and keep in touch throughout the course of the year to examine and assess applications and suggestions sent to the organisation from all over the world.

A passion for order and precision

When I was a dental technician, I had a laboratory with 25 employees and a clientèle of rather demanding professionals. In order to avoid any problems linked to quality, I established a set of precise rules. It was a control system that aimed to "Improve and Maintain Quality". Through time and dedication, we achieved considerable results which had positive knock-on effects on the quality of the items produced.

At the time, quality systems were not promoted by an international organisation. Instead, those wanting to improve the quality achieved and keep it constant adopted a control system that met the business's needs.

This is how Cattani came about

As everyone knows, I changed profession back when there was no prospect of future development in the dental technician's field. I stopped working as a dental technician and set off for broader horizons outside of the dental sphere, a field in which I had already made a name for myself.

Dentistry was changing, and new equipment was coming into play such as turbines and ultrasound, not to mention the new discipline of periodontal surgery. This discipline, and the equipment used, called for surgical suction, an area of production that the dental industry had overlooked all over the world. I felt that this shortfall in production had left the door open for a new industry. I was well aware that I would face sacrifices and obstacles, but I dreamt of having a business whose market was truly global, and I was ready to make any sacrifice necessary to pull it off. At the time, the Italian economy was booming and demand in dentistry was even greater than the supply, so it seemed like a good opportunity.

I don't think ISO was well known in Italy back then, in any case the new company wasn't aware of ISO so it was set up with a two-fold quality system of its own: "Maximum and Constant Quality"

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COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV GL =ISO 9001=

Tax code and VAT no. 01720020344 – E.E.C. VAT IT 01720020344 – Share Capital €1,549,800.00 fully paid up Economic and Administrative Index Parma Business Registry no. 01720020344



Whilst it was a small business with few employees, just like Cattani at the outset, the quality system controlled samples of every incoming product: materials, semi-processed goods and outsourced products, including the parts made in-house. This first inspection was geared towards ensuring it didn't stock any products which were not precise, and could therefore not be used.

The production techniques

When we made castings using milling machines and parallel lathes, it was virtually impossible to respect the tenth of a millimetre, a tolerance which was in itself too high for our production. Around that time, the first numerical control machines offering precision to the hundredth part of a millimetre were appearing in specialist metalworking press. I didn't even need to think about it; having made a few enquiries, I bought a numerical control lathe and milling machine.

It involved an outlay of five hundred million Italian lire, achieved thanks to the EU which was offering loans and subsidies to encourage modernisation in the metalworking industries It was a winning purchase. The new tolerance speeded up assembly, reducing the work needed for adjustments whilst increasing the pressure of suction units and making the parts interchangeable.

The electric motors

Thirty years ago, not much importance was placed on the choice of the electric motor or its quality. Today, in the scale of importance, the motor is key both in terms of electrical power, mechanics and performance. All our machines, including suction units and compressor heads of many sizes, are powered by an electric motor. We produce several hundred lines of motors with different functional and power characteristics. If it were possible to combine at least a part of them, we would be able to free up space in the warehouse and disinvest a reasonable sum of money. But our experience has taught us that each line of machines needs as many lines again of purposely-built motors. In our motor testing laboratory, we conduct:

- brake control tests;
- tests on the functioning of the machine with constant checks on electrical absorption and operating temperature;
- performance curves in suction and compression;
- sound vibration tests.

Line assembly

For the line assembly, the workshop manager and department manager work together to analyse the assembly systems for each line of machines, and accordingly train the employees. The line manager has the task of assisting employees with any difficulties and helping them accordingly, as well as supervising to ensure everything is performed as planned and as safely as possible.

A number of our machines need to be assembled in line, for the following reasons:

- the line helps maintain order in pre-determined positions, with the components to be assembled clearly visible. This ensures that none of the steps are overlooked or underestimated;
- at each stage of the line, the tools and equipment are assembled in a position which has

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been analysed and is comfortable for the purpose, so that operators are not forced to make exertions which, when performed repeatedly throughout the day, might fatigue the staff member and have a negative effect on his or her work;

• the trolley moves along the conveyor belt and stops in front of the operator at the right

angle to facilitate the task performed;

• the tools and equipment are controlled at periodic intervals as is the force of torque, thrust and any other factors affecting assembly, to ensure that each component is placed in the right position.

For parts requiring extreme precision, an oven has been set up in line with a constant temperature and an easy-read measurement system controls all the pieces at the same temperature.

Generally speaking the line does not speed up assembly, but instead creates the conditions required to improve it and ensure that workers do not adopt uncomfortable positions; at the end of the line, the assembled machine enters the inspection tunnel.

In-line inspections

All **inspections are conducted on an automated basis, first regulation inspections followed by those of a functional nature.** The machine is automatically taken off the line if it fails a test. List of inspections:

- safety tests, insulation, dielectric strength, earthing efficiency, dispersion and frequency;
- dynamic functional load tests, tests for voltage, current, power, breakaway test, negative pressure, max. pressure, temperature and vibrations.

Once testing is finished, the inspection sheet is automatically saved on the disk of the line-end computer as it can be used for consultation or statistical purposes. We do not feel it necessary to print out all the inspection certifications to enclose with our machines. We have instead opted to make them available for customers to download with the password when necessary; the plants (of the green variety) will thank us for it.

Quality first and foremost

All this painstaking care for our work, and all the special equipment we use, make for costs that are very high, although they are justified by the result achieved. Quality needs to be sought with determination, and must be scrupulously adhered to thereafter. We cannot afford to stop, as progress is unstoppable. Any companies left standing still soon find themselves ejected from the market.

I would like to tell the story of all the other pieces of the puzzle which have allowed us to notch up the quality and top-flight achievements the whole world envies us. We have done it all with a level of enthusiasm and passion which has only rarely taken financial aspects into account.

Yet even this result has been achieved, thanks to dealers, technicians and dental professionals worldwide that sell or use our machines who are as passionate about their work as we are, and who have spread the word about our products. Work has increased not least thanks to the word-of-mouth of satisfied customers. The **sky-high expenses have also borne their fruits** where quantity is concerned. We sell in sixty countries, where we have loyal dealers, some of whom have been our

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agents for half a century, where the elderly dealer has been succeeded by another member of the same family from the second and (on occasion) even the third generation.

They are dealers with solid companies and technical and sales staff who are proud to represent Cattani S.P.A., and who periodically come to us for ongoing training.

Rather than just describing them, the other pieces of the puzzle should be seen in action in the company itself. We will just outline them briefly here, in the hope that it will encourage those who have yet to come to Cattani to pay us a visit.

First in new technologies

With fixed-speed suction units and compressors, dentists had to switch the machine on and off. They were forced to do so because it was not possible to increase or decrease the motor rotation speed or set it to operate automatically. With Micro and Turbo-Smart, and later with all the products which harness modern technologies such as: Turbo-Smart 2V, Maxi-Smart, Micro and Turbo-Smart Cube and the new Cube compressor, it is now possible to adjust pressure and flow. If any difficulty is encountered during operation the self-protection mechanism automatically turns on, and the programmed function is automatically restored once the problem has been overcome; in addition, all the machines are set up to be connected to the dental studio's computer for remote control and adjustment. By pressing on the screen of the machine, including on the computer, the operator can find out about how the suction unit or compressor are working. He or she can also see the operating temperature, electrical absorption and what the main or most hazardous events are.

We are so proud of the flexibility achieved in our products and, not least, of their popularity amongst members of the dental profession that we have no intention of slowing the pace of our research either. We intend to keep abreast of technological progress which has continued to grow in recent decades, thereby offering us even more new opportunities for improvement.

Verification

The testing imposed by our Quality System means we can be sure our products are free from defects, and that the planned working characteristics including flow, pressure head and pressure are constant. All of which provides us an assurance, albeit within human limitations, because no individual or system can be considered infallible.

Our clients are familiar with the efficient nature of our products; our earliest clients, which we have been serving for over half a century, because they have sold goods that are now dated but remain in operation, whilst others with more recent experiences show us the same trust and confidence. In any case, they are all able to download the results of the inspections from internet.

In the handful of pages you have read, I have written about several decades of business for Cattani. They are pages that reveal our dreams, hopes, aspirations and achievements. It is a backdrop against which the **social role of the company has always been in the foreground.**

Those who only work to earn money, and for whom earning money is the main purpose of their work, are in a different line of work. We set out to establish a company which would serve us and our family as much as it would all the people who have had faith in our project, and their families with them. Those who set up a company have to bear in mind the harm the company can wreak on people and the environment if it is badly run, as well as all the good it can bring if their dreams

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Conclusions.

Before I draw these lines about quality to a close, I think a few words should be dedicated to sustainability and energy saving, which we view as an intrinsic part of our product quality. Overlooking these aspects means doing the very opposite of common good. In addition, sustainability goes hand-in-hand with technological evolution. These are values which are priceless if we are to preserve the natural resources our planet has given us freely for our children and grandchildren, resources that have allowed us to achieve our present level of wellbeing. If we convey these **ideals of common wellbeing** to young people through words and by setting an example, their enthusiasm will fire them to make sacrifices of their own, and we will doubtless be able to better the world.

We had planned almost everything. We didn't want to leave anything to chance; so much so that we could now say that we have fulfilled a story that had already been written. There is a new helmsman at the helm of Cattani, helped by a large number of professionals who are all priceless and indispensable. Everyone's commitment is needed to keep up with the times; the company would not be able to travel at the speed it has notched up if the brakes were applied to just one of its wheels.

Thank you for reading. If you decide to visit Cattani, let me know, I would like to be there.

Best regards, Augusto

To follow are photographs of machines being assembled in line, and during inspection.

Pub. April 2015