
FIAT CHRYSLER AUTOMOBILES (FCA) & MITSUBISHI MATERIALS

FCA VERRONE PLANT



PARTNERSHIP BETWEEN FCA GROUP
AND MITSUBISHI MATERIALS



(Left) **Leonardo Rossi**, FCA Verrone Plant Chief, (Right) **Marco Rimoldi**, General Manager of MMC Italia

FCA VERRONE PLANT MANUFACTURING PRODUCTS FOR ALL FCA GROUP BRANDS

Mitsubishi Materials Corporation (MMC) has built a firm partnership with Fiat Chrysler Automobiles (FCA) Group, one of the long-established automobile manufacturers in Europe, through the provision of a wide range of thoroughly-customized solutions.

FCA Verrone Plant is the production base for FCA Group. Located in Verrone, Piedmont, Northern Italy, the plant is surrounded by forests and rice fields. This large plant measures 60,000m², including a 3,000m² warehouse and produces manual (MT) and dual dry clutch transmissions (DDCT) for both gasoline and diesel vehicles across all FCA Group brands (Fiat, Alfa Romeo, Jeep, Chrysler, and Dodge).

FCA VERRONE PLANT AWARDED WORLD CLASS MANUFACTURING'S (WCM) GOLD LEVEL IN 2015

FCA Verrone Plant's extremely high production efficiency was recognized with the Automotive Lean Production Award, a coveted award for automotive products, as well as the WCM Gold Level award in 2015. The basis of these awards was FCA Group improvement plans for plants that manufacture Fiat, Chrysler, CNH, and Iveco. WCM excels in total

productive maintenance methodology (TPM), lean manufacturing and total quality management (TQM) based on 10 managerial and 10 technical pillars. The 10 technical pillars are safety, cost deployment, focus improvement, autonomous maintenance and workplace organization, professional maintenance, quality control, logistic/customer services, early equipment management, early product management, energy and environment, and people development. The most important of these is cost deployment, which involves the identification of loss and waste in the production process. Designed to achieve zero occupational and environmental accidents, zero quality defects, zero waste and zero loss by taking economic impact into account, it resulted in the reduction of costs across all plants. "We are very proud of the WCM award. The validation of the success of our efforts to achieve maximum efficiency throughout management increases our motivation to continue striving to improve all plant functions and enhances human resource cultivation. Receiving the Gold Level means the improvement that we have been committed to achieve has met the standard of WCM," said Leonardo Rossi, FCA Verrone Plant Chief. FCA Verrone Plant has also achieved both an environmental-friendly manufacturing system along

with its high productivity. In fact, the plant is located in the Baragge national nature reserve in Ticino.

REASONS WHY FCA GROUP SELECTED MITSUBISHI MATERIALS

FCA Group chose Mitsubishi Materials because of its great teamwork and cutting technology know-how that has achieved high production efficiency. Mitsubishi's technology was essential in helping FCA Group to achieve the WCM Gold Level. MMC Italia General Manager Marco Rimoldi and FCA Verrone Plant Chief Leonardo Rossi discussed and agreed upon the roles each company would play, as provider and user of the tools for future manufacturing respectively. "Solutions provided by Mitsubishi were practical and easy to adjust to achieve the desired results. As for the maximization of machinery capability, the tools were highly effective not only in reducing purchasing costs, but also in optimizing profitability throughout the entire production system," said Rossi.

The partnership between FCA Group and Mitsubishi is not limited to the development of technical solutions and the provision of advanced tools, but includes training for FCA Group staff. The unique training programs





Training program provided by MMC Italia (**Marco Giannini**, Technical Support and **Daniele Rametta**, Key Account Manager)

are customized for individual plants to achieve FCA Group goals as if they were tailor-made suits. Through the joint efforts of Daniele Rametta (Key Account Manager, MMC Italia), Marco Giannini (Technical Support, MMC Italia), Gabriele Raiano (FCA Verrone Process Improvement Manager) and Mauro Beltrame (FCA Verrone Know-how Engineer), the first FCA Verrone training program was implemented in May 2017 and was well received by the 40 employees that participated. "This program focused on FCA Verrone's steel, its most common material to be machined, and cutting technology know-how for turning," said Giannini, MMC Italia Technical Support. They worked to bring participants of differing ages, degrees of experience and knowledge to a standard level to ensure a solid understanding of the technology. The main contents vary from basic to advanced, with basic knowledge including turning insert machining methods and the meaning of tool names, all in accordance with ISO codes, basic knowledge required for the selection of the correct tool, plus an advanced knowledge including insert grades used for general steel and for turning of harder heat-treated steels.

The standard training given to specific groups achieved impressive results.

The most effective was personal training tailored to individual participants. "Outstanding collaboration enabled us to create programs that matched individual skill levels, and participants were very satisfied with the content. We are currently planning to provide programs for more advanced skills. This approach has been working smoothly," said engineer Beltrame. The Plant Chief Rossi added, "We pay special attention to the performance of the tools. Great performance leads not only to reduced costs, but also to improved process efficiencies. Elongating tool life and stabilizing tool performance can help us to achieve higher goals."

RESULTS THAT FCA VERRONE HAS OBTAINED THROUGH THE COLLABORATION WITH MMC

The major advantages of the collaboration between FCA Verrone and MMC are the ability to have continual discussions among engineers and other key personnel from both companies, and the shared checking of production lines to identify problems and establish solutions.

"We met the Key Account Manager at MMC Italia and asked him to extend the life of tools used in turning by 30%. We considered solutions involving improvement of boring bars, and they

were ready to proceed within one week. Results of the tests showed that we could successfully increase tool life by more than 50%. This is a huge difference," said Manager Raiano with a smile. "I also participated in the tool testing to confirm performance and reliability," said Patrizio Lalà, Tool Specialist at FCA Verrone. "Flexible customized training, products and technical services that achieve high productivity are keywords at MMC," said the Plant Chief Rossi. The greatest strength of the collaboration between FCA Verrone and MMC is the ability to identify problems and find the best solutions based on logical approaches.

"It is essential for us to improve processing efficiency and speed," Rossi confirms. When we encounter a problem, we require measures that produce solutions in a timely manner. We also know that standard measures cannot solve problems promptly. Our joint project with MMC proved this."

SPECIAL TRAINING FOR TEAM SPEAKERS

The training programs that MMC provides to FCA Verrone prioritize the cultivation of personnel that play key roles at production sites. FCA Verrone Plant has invested a large amount in the cultivation of team speakers.





(From the left) **Mauro Beltrame** (FCA Verrone Know-how Engineer), **Gabriele Raiano** (FCA Verrone Process Improvement Manager), **Patrizio Lalà** (FCA Verrone Tool Specialist), **Daniele Rametta** (MMC Italia Key Account Manager)

“The team speaker position was implemented by FCA Verrone and has been expanded to other plants. The title differentiates the position from team leaders at plants producing automobile bodies and emphasizes their different specialties. The most qualified person among the workers at the cutting processing sites is selected to be a mediator between the production site manager and machine operator. Team speakers are required to participate in a wide range of training programs to gain sufficient know-how of basic tools and machining processes and to improve their communication ability. MMC programs have been very useful because they provided the best training programs to the most suitable personnel. WCM requires the categorization of human resources according to capability and specialization, which allows us to select the employees with the necessary abilities for each project. We have our specialists with higher skills handle relatively difficult problems, and we ask on-site workers to handle the more routine problems,” said Rossi.

“We have asked MMC to create new training programs that enable higher quantity and quality. In regard to quantity, we would like to improve the efficiency of basic programs to qualify as many

employees as possible; and in regard to quality, we would like to provide more specific, highly-specialized programs that deliver practical and applicable content. Our final goal is to increase the overall specialization of the whole workforce. We would like to establish a system in which all our employees can accurately perceive situations, analyze them to the degree possible at the site, and understand the processes and parameters that influence them, as well as master the technical terms required to exchange information with tool manufacturers,” said Raiano.

WHAT FCA VERRONE EXPECTS FROM MMC

The services that MMC provides to FCA Verrone are thoroughly customized. “MMC reports are extremely useful in sharing information at the plant,” said Beltrame. MMC Italia Key Account Manager Rametta added, “We determined the format of the report together because communication is the most important product.” The sharing of information is essential to improving speed and efficiency; the strengths of the plant. FCA is also working on the development of a software application that allows users to check the state of all manufacturing processes from their smart phones.

The collaboration between MMC Italia and FCA Verrone, as a tool supplier and user, is projected towards a bright future. “I expect that MMC will keep sharing with us their know-how related to technological development, and that it will provide us not only with products but solutions, with the same determination and results, as well as help us in basic and advanced training,” continues Director Rossi.

Process Improvement Manager Raiano added at the end of the interview, “We’ve known MMC for a long time and have worked together in the past outside Italy and I really have a good impression of them. The advantages of MMC in Italy are the quality of its services, the speed of its response and its enthusiasm regarding tests at the plant. Even when we require solutions to issues that may be outside the range that MMC would usually be expected to handle, MMC staff work hard to provide results. It’s this attitude that puts MMC in a category of its own.”

