



AGV-Systems for Glas Industry and new Markets: Visit to Italtcarrelli

Only sports car enthusiasts know that Italy is one of the very important industrial nations - even in the world of industrial trucks one is on the road successfully. FTS-/AGV-FACTS made its way to northern Italy to the beautifully situated village of Chiampo Vicenza - actually located in the „tannery belt“, but not too much of that can be felt today. The Negrin Group has been producing industrial trucks in Chiampo since 1962. In two plants with a total of around 100 employees:

- Self-propelled platforms
- special-purpose vehicles
- Devices for the flat glass industry and
- AGV transport systems.

In the field of glass transporters, the company leads the world market supplying its products and solutions to all large flat glass producers such as Pilkington, AGC, Saint-Gobain, Guardian and many others.

The Negrin Group started in 1962 as a dealer of Hanomag construction machines and initially started manufacturing front stackers only for its own workshop. But these were also quickly produced for neighbours and friendly companies.

1969: First electric forklift truck, side-loaders and platform truck

1980: First specialty machines such as heavy load capacity platform transporters and side-loaders

1990: Involvement in China in Dalian with forklift trucks - but this segment was abandoned.

1995: First repair orders at Pilkington-Glas in Italy lead to contact with the glass industry. The company slowly enters the field of glass transporters (internal loaders, platform trucks side-loaders, etc.).

2012- the foundation of an own subsidiary in Turkey with 6 technicians follows, further subsidiaries in the USA, South America and North Europe follow.

Davide Schiavon has been in charge of sales for the Italian family-owned company for many years and has noticed that for around 20 years the desire for particularly high precision has come especially from

the glass industry. Valuable flat glass plates have to be loaded with millimeter precision and so the company began to convert to driverless vehicles and today offers AGVs as standard solutions - even if the glass industry tends to drive on two tracks: Manual drive during the transportation in the warehouse, because most of our customers don't have a suitable



▣ *Italtcarrelli TPE 300 self-propelled platform transporter with 30t of load capacity for coils transport.*



Warehouse System Management to control the racks handling in the warehouse, and automatic drive AGV for the pick-up of the racks from the cutting line since here we can easily interface our machines with the automatic stackers at the end of the float line.

Semi-automatic guidance solutions such as drive-in aid for picking up A-frames on internal loaders can be seen as the starting signal for FTS production. In the meantime, the company has developed several AGV solutions, including inductive and laser guided applied to huge platform transporters that can reach extremely high accuracy in positioning. A team of highly specialized engineers develops and designs the AGV systems with the use of innovative and reliable sensors and scanners from well known suppliers or even developed directly from Italtcarrelli.

Schiavon emphasizes that the worldwide trend in the glass industry is towards full automation - this has led to the development of a separate FTS division which is now available in all markets - especially in the platform segment or for handling very heavy loads.

▣ *Italtcarrelli EN4L 150 jumbo size side-loader with 15t of load capacity for jumbo glass handling.*

The largest FTS ever built was 14,000 mm long and lifts 120 t - it is used to remove moulds from Heat treatment furnaces and offers a sensational positioning accuracy of ± 5 mm in this order of magnitude.



▣ *Italtcarrelli TPE 4L 1250 self-propelled platform transporter with 125t of load capacity remote controlled and with multidirectional steering system.*



FTS-AGV-Facts talked with Davide Schiavon about the perspectives of the company and its products on the occasion of the exclusive company visit in September:



? **FTS: How many AGV vehicles has your company already built and how many are currently in use worldwide?**

D.S.: We've already 12 AGV systems operating in different fields, mainly on metallurgy, aerospace and glass. The demand on these systems is increasing considerably and currently we're dealing an higher number of AGV systems than the ones already supplied.

? **FTS: Do you manufacture controls, steel structures and load handling attachments yourself in order to be independent of suppliers?**

D.S.: Of course yes, Italcarrelli is committed to be a unique supplier for machines and AGV automation. This is a very important advantage for our customers since the supplier is only one company.

? **FTS: Service is just as important as the product, how do you organize service for your systems worldwide, what role does remote maintenance play in this?**

D.S.: We've several partners worldwide highly qualified and trained in the supply of on site after sale service. In addition Italcarrelli is currently starting new after sale service branches in many countries. Lastly we have developed a very efficient remote assistance service through a special unit installed onboard of our machines that allows to our after sale service dept. to get connected with the machines on real time to perform debugs, trouble shooting, etc. Italcarrelli provides many kind of service contracts including 24/24 365 days per year.

? **FTS: The market for FTS is growing. More and more providers of special FTSs and large self-propelled platforms are entering the market. In which industries do you see good opportunities for your company and its products?**

D.S.: We are focusing on specialty applications on which our specialty machines are required, like the heavy load capacity and tailored platform transporters, glass handling machines. Today Italcarrelli covers very important positions in the glass industry, metallurgy and aerospace, but thanks to new investments and the development of new machines, actually we are targeting to many new fields.

? **FTS: How does the project planning process between the customer, planners and your company work? After all, every project requires extensive specifications to be worked through and country-specific regulations to be implemented?**

D.S.: On each AGV projects a lot of time has to be spent for engineering, first of all to understand the customer requirements and then of course to transform these requests on systems that can be manufactured. Of course we've also to pay a lot of care of the local regulations according to the country of destination, especially if the machines will work with presence of operators, so non restricted areas, because safety is our primary goal.

? **FTS: Which navigation system will be the right one for your customers in the future, or are there different navigation systems that you can alternatively recommend?**

D.S.: Depending on the type of application we recommend different navigation systems. Mainly we work with inductive guidance systems, very accurate but not so flexible and suitable for limited areas, or the laser guidance (LGV) that is much more flexible, with a small impact on the installation and that especially is extremely flexible because it can be adapted to any situation and also easily to be modified and extended after the installation. Very often we combine these navigation systems together or with other sensors like the ultrasonic or optical to improve the positioning or the accuracy. Now we're working also on the differential GPS navigation system that is a very interesting solution for the outdoor transportation.

▣ *Italcarrelli TPEN 4L 250 self-propelled platform transporter with wireless coupling and optical guidance system for aerospace applications*



? **FTS: FTS systems have a long service life, do you also offer updates, overhauls and upgrades for your vehicles?**

D.S.: As for all the machines, also the AGVs require maintenance service for which we provide a highly qualified service with programmed maintenances. On AGV systems, especially if operating with presence of operators, it's mandatory a strict control to check the good status of systems and safety sensors that prevent collisions. Of course all our AGV systems can be upgraded with new software and technology.

? **FTS: What future developments can we expect in 2019, after all, will you be attending events as diverse as GIS, METEC, Bauma China and Glas-tec in Düsseldorf?**

D.S.: We're working on new specialty machines that can be applied to new fields that are becoming more and more interesting for our products and to which of course the AGV can find application.

info

Pictures: Italcarrelli

ITALCARRELLI Srl
36072 Chiampo (VI) ITALY
Tel.: +39 0444 623393
+39 3480068272

▣ *Italcarrelli - Chiampo site expansion*



▣ *Italcarrelli TPEN 4L 800 self-propelled platform transporter with 80t of load capacity remote controlled and with multidirectional steering system*

