

PRESENTATION

Divisione Elco srl has been created in the 80ies and works for the project and realization of systems for the automotive society and other sectors.

In these last years it has focused on the creation of electronic appliances that command overhead monorail conveyors. Nowadays, thanks to the new studies in the field (and described here under) we produce a lot of appliances for the automobile industry and not only, we employ them also for the textile, pharmaceutical, food, aerospace and paper industries.

Divisione elco Srl believes in the collaboration with other societies : we offer a lot of time and resources for the research and appreciate the technological exchanges between laboratories.

OUR PRODUCTS – CORE BUSINESS

Our overhead monorail conveyor system uses an electrified rail with little copper cables called strips. They supply voltage to appliances which move with complete autonomy on the plant path. We produce also appliances which receive supply through induction, so without any direct contact within parts.



Advantages of EMS system with electrified strips are numerous :

Each trolley is independent one from the other, so that in case of average the operators can work directly on the faulty one without stopping the others and the whole production line. This feature gives the possibility to divide the plant in different working tracks on which trolleys can have different speeds fitted on the path they're working on. We can have high speeds (90 mtrs. per min.) and very slow speeds (few mtrs. per sec.)

EXAMPLE OF PLANT : For FIAT POLAND we realized an electrified virtual chain with more than 60 trolleys for the movement of the doors of FIAT 500, FIAT PANDA and of FORD KA. They stay in line for more than an hour remaining completely autonomous with a very slow speed and with a distance between them of 8 cm. For this kind of working line we employed an absolute linear encoder.

Another similar plant can be found in FIAT SPA and PSA for the creation of commercial vehicles.

Following the last advanced technologies, our appliances can read different kinds of encoders.

Encoder with a holed bar



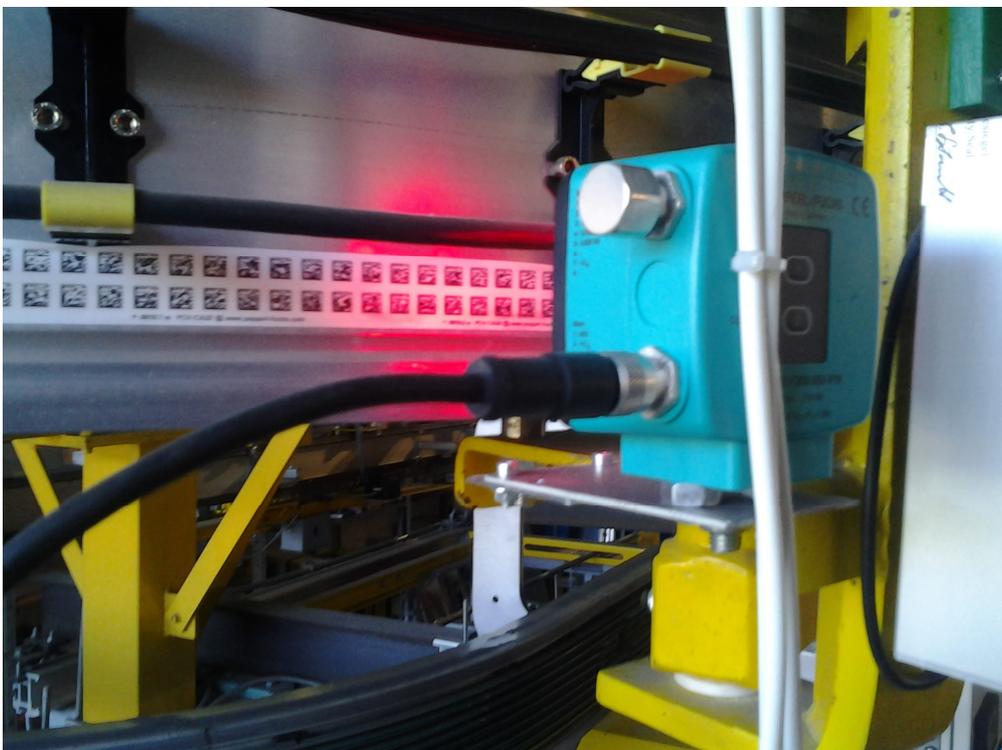
Laser encoder for barcodes





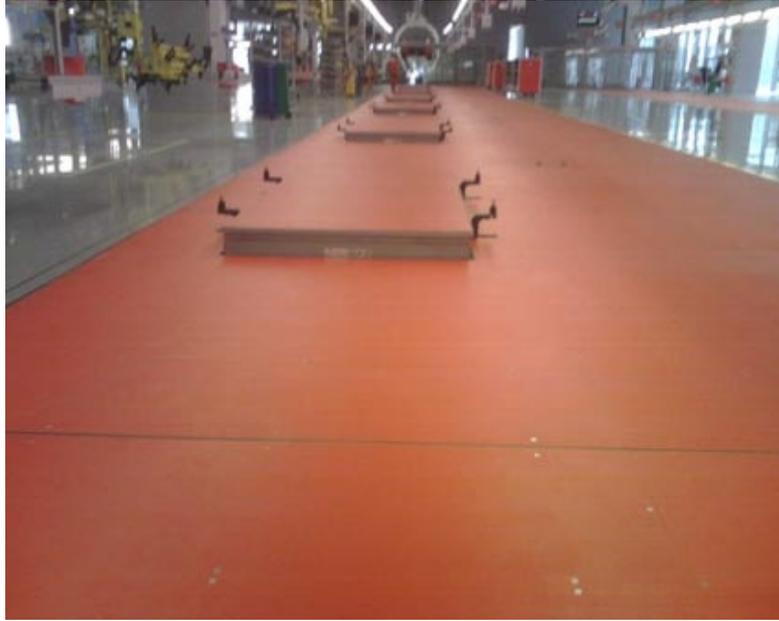
We can offer EMS without electrified strips but with electric induction (without any physical contact between the supplying part and the part which uses electricity). This last picture shows the transport of a special hook for cartoon bodies for SCA paper industry of Mannheim (Germany) and can be a perfect system to be applied in places with fire dangers (this is because having no physical contact we reduce the creation of fire sparks).

Encoder System photcamera for DATA MATRIX :

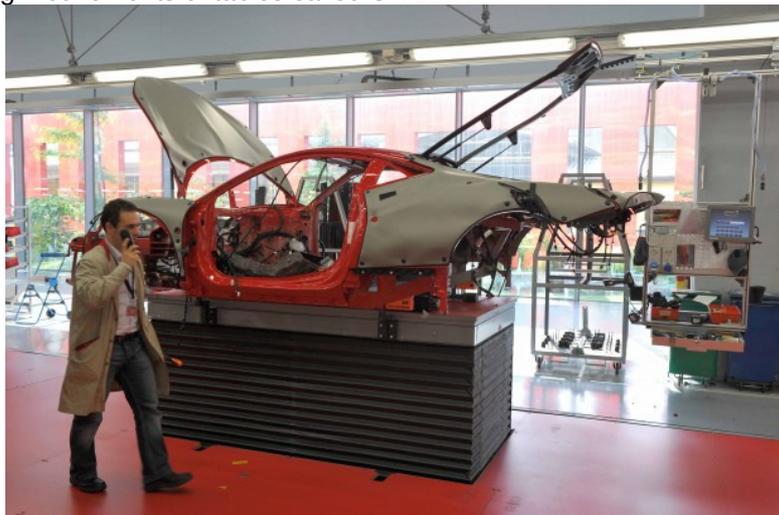


This kind of encoder has been employed in FIAT SPA in Pomigliano d'Arco (Naples) and FIAT SERBIA.

Our appliances can manage other movements on trolley like lifting :



We can manage lifting movements of tables called SKILLET :



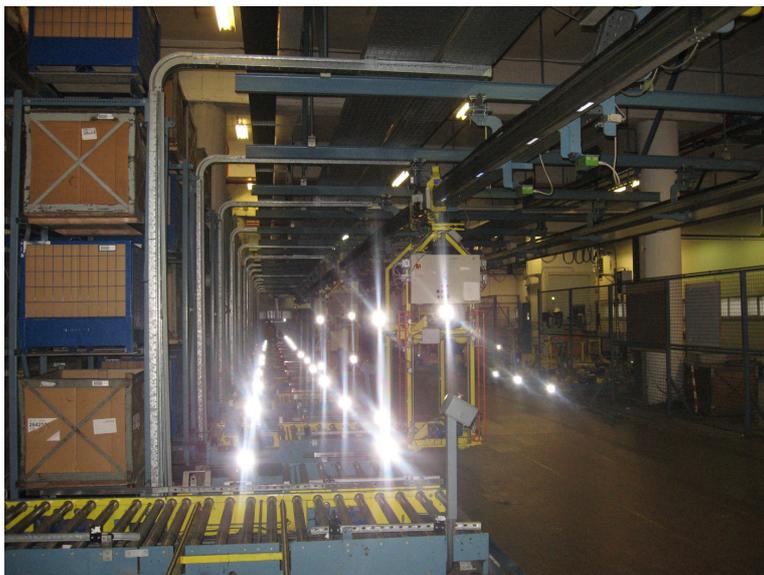
Example of lifting,



Example of rotation,



Example of rollers :



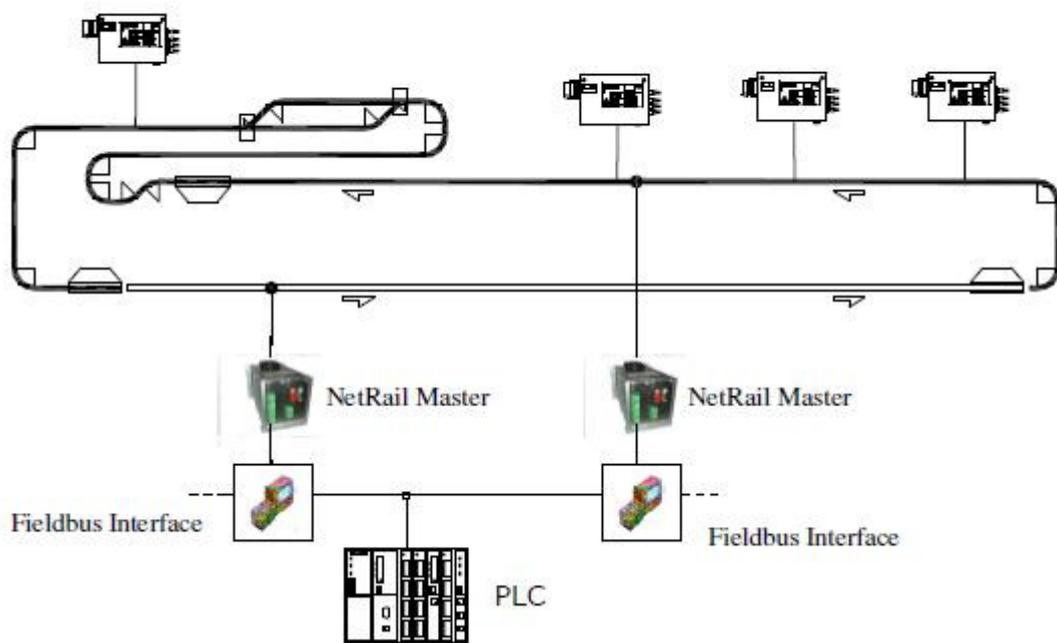
Mouvements always follow the direct exigences of plants dispositions and of our customers.

Near the traditional transport systems, we created a new communication system called NETRAIL, which always tells the trolleys' status (actual position, speed, particular conditions like sensors status and detailed diagnostic of anomalies) to PLC (in the electric frame on earth).

Each trolley is focused with extreme attention: we can modify the devices of each of them following our needs. We can modify speeds of each of them nowhere they are and we can always change path positions.

Interface with PLC is with Fieldbus : Profibus, Profinet, Ethernet and others. The Utility of communication between NetRail and PLC for the PLC SIEMENS are already available and we're preparing those for the PLC ALLEN BRADLEY.

NETRAIL SYSTEM CONFIGURATION EXAMPLE



Divisione Elco Srl can offer the whole EMS system (both the electronic and the mechanical part) with assistance for an eventual assembly, basing on a sure high technical skill of its employees.