



OM benchmarks its material handling vehicles

OM focuses on 100% reliability of its products.

Hannover, 28 May 2008 Adhering to European regulatory industry requirements, OM Carrelli Elevatori performs extensive tests on every new vehicle released - a process known as functional qualification and compliance testing - with the goal of measuring performances, and certifying their reliability and compliance to regulatory requirements. However, for OM this procedure does not adequately ensure the comprehensive functionality and security of its products and therefore, in addition to these, the company performs additional tests – known as "functional plus" tests – to evaluate their reliability in order to issue the warranty for a finished, fully approved, high quality, secure, durable product.

Such sensitivity to excellence has developed over time. OM performs an increased number of tests on single components and on the prototype of the new product range, requiring better results than minimum mandatory compliance levels for both functional and stress tests. In fact, prior to beginning manufacturing, the component and/or prototype must successfully pass reliability testing based on specific test cycles. In particular, a prototype representing a new product range must undergo a 1000 hours-long *endurance test*. While these operations imply considerable cost and effort to OM, they undoubtedly offer a return in terms of potential issues that in this way can be identified, classified and reduced prior to starting large-scale manufacturing.

Clearly every new product will have to pass a list of specific tests defined with the projects division; for example, an updated forklift truck model fitted with a newer forklift will have to undergo and successfully pass the mast bench duration test based on a specific testing checklist. Therefore, the time required for the complete homologation of all products is variable, depending on new components being introduced.

The Prototypes and Testing division is equipped with state-of-the-art acquisition and tracking devices, including HBM data acquisition, LabView, speed tracking GPS systems ensuring accurate and rapid measurements, and automated and robotized test benches. The bottom line sums up to faster testing throughout the product development stage.

Among the types of tests to be performed for complete homologation of OM forklift trucks are:

Qualification functional tests, which consist of set-up and tuning operations, performance tracking, thermal balance tracking and new component functional testing. Some of the most significant compliance testing include breaking, stability, seat belts, visibility, vibration. Noise and destructive compliance testing consists in a structural check of certain forklift components: Impact Drop Test, structure testing of the breaking system, engine/battery hood load test. Functional plus tests include duration/fatigue, extent-metric tests, monitoring at the customer's site and Fumes analysis. All these tests are performed within OM facilities by qualified staff.

Due to the complexity of the resources involved, the 1000 hours reliability tests of the new XD/G15-20, XD/G25-30 and XE13-20AC are performed at the NARDO' TECHNICAL CENTER, a confidential and secure environment in the heart of the Salento region, a unique and exclusive internationally renowned track, of 12.5 km circular ring. The test track is also famous for hosting testing activities of leading car-manufacturing companies from Europe and around the world and manufacturers of tires and other car components. The



choice of using the Nardò Technical Center as open air external laboratory to perform these fundamental tests explains how important it is for OM to bring highly reliable products on the market – here it is in fact possible to define and implement testing programs in multiple situations and complete security. Currently, the center is hosting stress frame tests, which will soon be manufactured in the plant.



File: Nardo test facility.jpg

Text: All new OM forklifts are tested 1000 hours at the Nardo test facility.

OM Carrelli Elevatori

OM Carrelli Elevatori (www.om-mh.com) is the leader in the Italian market in the Material Handling sector. The company belongs to the international Kion Group, a major global player. The Group, with facilities in Europe, South America and China, employs approximately 22,000 people and registered revenues in excess of 4.3 billion Euros in 2007. Within Kion, OM Carrelli Elevatori is the brand that is most effective in representing values such as reliability, customer focus and dynamism. With its headquarters in Lainate (MI), 7 subsidiaries and 2 manufacturing plants in Italy and one in China, 3 subsidiaries in Europe and 1 in China, OM employs 1,276 people, 2,800 specialised technicians and 1,350 sales people. The broad product range completely renewed over the last five years has made OM one of the market's most competitive companies with revenues totalling over 358 million Euro in 2007 and a 17% increase in sales registered year over year (2007 vs 2006).

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