



The Buttimer Group

benefiting from European markets such as Poland

The Buttimer Group commenced operations in 1978. The founder, Edward Buttimer, was previously involved in the dairy and animal feedstuffs industries. As a result, the company initially specialized in servicing these two industries. This led it into agri industries, specifically mechanical handling. As a result of market restrictions within Ireland, the company was forced to diversify to allow for continued growth. However the core industry has remained mechanical handling of dry bulk and liquid bulk cargoes. As a result of the diversification, the company built up a strong in-house capability in all facets of structures, both static and dynamic. This experience, blended with core experience in mechanical handling, allowed Buttimer to offer its clients engineering, design, and equipment manufactured specifically for their applications, and unique within the industry.

In 2005, Buttimer began to search for new markets in Central and Eastern Europe, this coming about as a result of a desire to pursue and to sell the core experience. The most interesting country appeared to be Poland with its multiplicity of port areas specialized in bulk handling of such products as grain/cereals, biofuel, coal, biomass and aggregates plus its substantially sized agri industry. From the very beginning, Buttimer has striven to meet its clients' expectations, and to offer them designs, complete and custom-built solutions specifically suited to their needs and local conditions. Buttimer offers turnkey services, from a concept development, general design and equipment detail design, to project management and erection. This mainly refers to ships' loading and unloading, but also to the whole transport and storage infrastructure of the wharf. Buttimer's experience is apt for all industries that require mechanical handling of dry bulk cargoes.

The principal method of transporting is a belt conveyor which allows for the biggest capacity of carried products. For

so-called heavy products, such as coal and aggregates, Buttimer engineers have designed specialized conveying equipment. The company also designs and supplies loading conveyors, telescopic stackers, shiploaders and unloaders, plus all associated equipment for ports. Manufacturing is located both in Poland and in Ireland. The components used, such as, drives, bearings or belts, are delivered by reputable world suppliers. The conveyors' capacities are accommodated to the client's needs, typical capacity from 800tph (tonnes per hour) up to 2,000tph for product mass of up to 1.6t/m³. Buttimer also supplies the market with equipment of the reputable Danish company, Cimbria, for so called lightweight products, such as, cereals, extracted meals, and biomass. Cimbria is represented by Buttimer, both in Poland and in Ireland. Cimbria has over 60 years of experience in heavy-duty conveying equipment manufacture, such as bucket elevators, belt and chain conveyors for various types of grain and granules. The Cimbria equipment is renowned for its minimal energy consumption, relatively 'small' dimensions in relation to the capacity, and also for its simple and reliable construction enabling for a quick assembly and easy service.

Within the company's chosen sectors, namely port and mining/power industries, there has been a trend/demand for ever larger-capacity equipment, conveyors, elevators, unloading hoppers loading equipment etc. Within the mining/power industries there has always been a demand for increasing sizes of equipment to meet their needs. However within dry bulk handling in the port industries, the demands in recent years have got bigger and bigger, for a number of reasons. Just a few of these are increased populations and the need to import greater quantities of cereals, increase in moorage costs etc. This was an area the Buttimer Group sought to pursue.

It is safe to say that no two ports are the same; each has its own uniqueness and limitations. However, one thing is constant: there is always a shortage of quay space. As equipment gets larger, space is at a ever increasing premium. Conveying systems are likely to be stationary and hence cannot be moved, however both loading and unloading equipment can be shifted around. Historically, unloading hoppers that are fed by crane and grab are rail mounted. Whilst the RMLs (rail-mounted loaders) and cranes can be moved to either end of the quay, they are always there and taking up space. The move in recent years has been to make these, both cranes and hoppers, mobile; therefore, they can be moved away from the quay wall whilst not in use. This results in the need for DMLs (dockside mobile loaders). However, with DMLs come new problems. Coupled with the



need to move the unit is the problem of the ever-increasing need for larger capacities. One other fact one can say about all ports is that not one has a perfectly smooth and level quay wall.

This brings new challenges as the necessary DML can be up 14m wide and 14m long, with a height of 18m. As stated, no quay is level, and so the structure of the DML must take up the difference in heights. This will result in twisting of the structure and hence the generation of large torsional loads on the structure. There are two choices here — either make the structure large enough to take up these loads, or make the structure flexible. Both options present obvious problems. When Buttimer began designing ship unloaders, both RMLs and DMLs, in the early 1990s, this was one problem that had to be addressed. On RMLs, this is easily resolved as tracks are level, but DMLs were the problem. Buttimer's engineers designed a hydraulic system that acts as a suspension, jacking and braking system. This system takes up level variations of up to 1m across the diagonal of the structure without adding any extra torsional loads to the unit. This allows for a lighter structure and coupled with Buttimer's advanced steering system, allows for a highly manoeuvrable unit and negates the problem of structures cracking. The units, whilst weighing up to 120 tonnes plus equipment, are self-driven and operated by a simple handheld remote control. Buttimer's hydraulic suspension system has an Irish patent and also a worldwide patent pending. Coupling the above with the company's sophisticated design of dust suppression and filtration means that the system is highly effective. These units have been supplied to Ireland, the UK and Poland.

Within large mechanical handling equipment this year, Buttimer has delivered and erected the largest individual dry bulk handling facility in Poland. The investment is located at Swinoujcie Port and was undertaken by Bunge, renowned



worldwide for oilseeds processing and a recognized producer of margarines and fats worldwide. The complex installation is intended for soyameal import and also for export of rapeseed cake, being the by-product from Bunge plants in Poland. Ship outloading capacity, using two cranes plus two RMLs as well as conveyors, elevators and weighing equipment, is 800tph (0.6t/m³) and can handle ships up to Panamax type. Export capacity is 500tph. In addition, Buttimer's equipment is used for trucks and wagon loading and unloading. The main conveying equipment was supplied to Buttimer by Cimbría. To follow on from earlier comments, the conveyors were the largest that Cimbría has ever made and were designed specifically for this project.



Furthermore, Buttimer co-operates with such companies as, MTMG — a member of ATIC Services, Cargill, Cefetra and ADM, and it has also supplied equipment to ports such as the Port of Cork, Shonnon Foynes Port, Dublin Port, Greenore Port, Port of Gdynia, Port of Gdansk and the Port of Swinoujcie, to name just a few.

To summarize, the company's core activities are concentrated on a complex solutions in such areas as unloading, reloading, transport, bulk storage and all necessary processes in between, be it weighing, cleaning etc. The Buttimer Group scrutinizes the possibilities and advises the best and most cost-effective solutions to its clients; its assistance is assured from developing a concept and a project to project management, equipment delivery and erection.