

Layher.



Layher Allround Scaffold Ideal for Maintenance of Industrial Building



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Layher the name of German Company produces high-quality scaffolding systems in Germany. Layher has worldwide presence with more than 40 sales subsidiaries. The products are being used by industries like Construction, Cement Plant, chemical plants, power plants, at shipyards and offshore.

More Possibilities - Layher Products and Services

Layher's present product characteristics and services help customers achieve long-term success and increase the profitability of their companies. The Layher Allround Scaffolding has been established as a synonym for modular scaffolds on the market. The Allround Scaffolding offers unsurpassed versatility to be used in construction sites, chemical industry, power plants, aircraft, shipyards, event sector, theatres and arenas.

Application of Layher Allround Scaffold in Cement Industries

Cement silos are either part of the production process in integrated cement plants or they can also be the key part of distribution terminals. For the cement industry these storage

silos are very important because this allows a continuous production while the cement dispatch can be discontinuous. Largest cement storage silos in the cement industry are built with diameters up to 30 m while typical silos for the storage of cement have typically 16 to 30 m in diameter and Height 60 m in height. It is clear that such silos require an efficient and trouble-free emptying. Accordingly highest requirements are given to overall plant reliability and practically 100% availability. To achieve a high availability flow problems have to be strictly eliminated. From the theory of flow in silos it is well-known, that this can only be achieved with mass-flow. For cement silos the central cone version has become the predominant design. On the one hand the central cone has a displacement function for the material in the silo; on the other hand several designs especially for multi-compartment designs become possible. Multi-compartment silos are used for producing special cements from a number of main and secondary cement components.

Not only has the shape of the building reminded of a crystal, but also the surface of the façade. To attach the Local Scaffolder solved this task technically with the Layher Scaffolding and Technical team: section by section they adapted the scaffold to the slope of the building with various brackets on the inside and then shifted it inwards by one scaffold width. Scaffold was anchored with the help of Layher Anchoring equipment, even the increased wind loads could be transferred without putting unnecessary strain on the structure.

BBN Engineering have done excellent work for erection and

Dismantling of Scaffolding. Thank you for Allround Scaffolding Systems simple, Fast and economical, which help to meet requirement before time completion of work. BBN Engineering (the Scaffolding Company) is responsible for entire scaffolding work. The construction of Scaffolding for maintenance of Silo is challenging task due to wind pressure. The selection of support systems (scaffolding with permanent structure) and avoid obstructions by bracket or cable tray around the silo. Layher Allround Scaffolding systems provide unique, bolt-less connection technique, the patented Allround joint has replaced the conventional scaffold technique especially in construction of Scaffold for Silo up-to Height 54 meter. Allround Scaffolding can accommodate all types of high loads and is the ideal system for all kinds of support scaffolding. Allround scaffolding has an efficient solution to deal with all challenges, regardless of whether they involve false work at great height or round inner scaffolding.

It needs to be built in a modular scaffolding system for maintenance of Silo and high rise Industrial structure. Cement Plant have situated near the sea shore so need to take care of wind force.

Anchoring is essential for the stability of the scaffolding must be continually installed as scaffolding assembly progresses. Only provide anchoring on sufficient strong components, if necessary testing the anchoring surface by pull-out tests. A check can be dispensed with if sufficient load-bearing capacity can be assessed on the basis of professional experience and the service value of the anchoring

force does not exceed 1.5 KN or in the case of reinforced concrete.

Connect Horizontal Ledger with two standard couplers with very wide scaffolding structures, it must be necessary to anchor with the aid of a horizontal ledger. The selection of anchoring configuration depends on the bay width, the load on the scaffolding, Live load, wind load and the structural height of the scaffolding. As the load on the scaffold increase, the anchoring configuration must become denser in order to pass the force safely into the anchoring surface. The dense the anchoring configuration shall the lower the force on the individual wall ties.

Landing - Type Aluminium Stair Access

With Layher Modular stair tower, access possibilities that always fit and that match the system. With the landing type Aluminum stair tower, it is simple to construct a 4-standard stairway tower, either integrated into the scaffolding or as a free-standing access structure anchored on the building. There is no hindrance to work on scaffolding by using Aluminum landing type stairway. Furthermore, a distinction is made between independent access structures that are anchored to the silo and access structures that are integrated into the Scaffolding. The maximum Permissible load bearing capacity of Aluminum stair tower is 2.5 KN/m². The load bearing Capacity of Access Platform is 2.5 KN/m². It is easy to construct up to 48 mtr height due to light weight components. Attach the necessary anchoring continually in accordance with structural requirements. Entire Scaffolding is connected with two stair tower considering all safety measures including hand rail at



Layher Allround Scaffolding with Aluminium platform stairway up to 48 mtr height at Cement Plant in Panipat, Haryana India (Courtesy: BBN Engineering)

both side.

Unlike external platform stairway access, the platform stair tower has the advantage that work being done inside the scaffolding is not hindered by people ascending or descending.

Allround Scaffolding, thanks to 8 different connections possible at the Allround connector and the variable choice of angles, it is simple task to erect scaffolding around curved surfaces. Possible connections and variable angle selection, curved surface can be enclosed with scaffolding without any problem. To build economical large-diameter scaffolding, the largest possible bay widths must be planned. In systems solutions using Allround equipment, two variants have proven their worth in practice: in the first variant, only system bays are used, while the second variant uses intermediate bays. In both cases, it is recommended that at least the last bay be selected as an equalizing bay.

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