Self Erect Cranes

Used Self Erect Cranes Missouri - The base of the tower crane is typically bolted to a large concrete pad which provides very necessary support. The base is attached to a mast or a tower and stabilizes the crane which is connected to the inside of the building's structure. Usually, this attachment point is to a concrete lift or to an elevator shaft. Typically, the mast is a triangulated lattice structure measuring 0.9m2 or 10 feet square. The slewing unit is connected to the very top of the mast. The slewing unit consists of a motor and a gear which enable the crane to rotate. Tower cranes are able to have a maximum unsupported height of 80m or 265 feet. The maximum lifting capacity of a tower crane is 16,642 kilograms or 39,690 pounds with counter weights of 20 tons. Moreover, two limit switches are used in order to make sure that the operator does not overload the crane. There is even one more safety feature referred to as a load moment switch to ensure that the operator does not exceed the ton meter load rating. Finally, the maximum reach of a tower crane is 230 feet or seventy meters. There is certainly a science involved with erecting a tower crane, specially due to their extreme heights. At first, the stationary structure needs to be brought to the construction location by using a big tractor-trailer rig setup. Then, a mobile crane is used in order to assemble the equipment portion of the crane and the jib. Then, these parts are connected to the mast. The mobile crane then adds counterweights. Forklifts and crawler cranes can be a few of the other industrial machinery that is usually used to erect a crane. Mast extensions are added to the crane as the building is erected. This is how the height of the crane is able to match the building's height. The crane crew uses what is called a climbing frame or a top climber which fits between the top of the mast and the slewing unit. A weight is hung on the jib by the work crew so as to balance the counterweight. Once complete, the slewing unit can detach from the top of the mast. In the top climber, hydraulic rams are used to adjust the slewing unit up an extra twenty feet or 6.1m. Next, the crane driver utilizes the crane to insert and bolt into position another mast part piece.