Self Erect Cranes

Used Self Erect Cranes Iowa - Typically the base which is bolted into a huge concrete pad provides the essential support for a tower crane. The base is attached to a mast or a tower and stabilizes the crane that is connected to the inside of the structure of the building. Normally, this attachment point is to an elevator shaft or to a concrete lift. The mast of the crane is normally a triangulated lattice structure which measures 0.9m2 or 10 feet square. Attached to the very top of the mast is the slewing unit. The slewing unit is made of a gear and a motor which enable the crane to rotate. Tower cranes are able to have a maximum unsupported height of 80m or two hundred sixty five feet. The maximum lifting capacity of a tower crane is sixteen thousand six hundred forty two kg or thirty nine thousand six hundred ninety lbs. with counter weights of twenty tons. Moreover, two limit switches are used to be able to make sure that the driver does not overload the crane. There is even one more safety feature known as a load moment switch to make sure that the operator does not surpass the ton meter load rating. Last of all, the tower crane has a maximum reach of 70 meters or 230 feet. Due to their extreme heights, there is a science involved to erecting a crane. The stationary structure would at first have to be transported to the construction location by using a large tractor-trailer rig setup. Next, a mobile crane is used so as to assemble the machine portion of the crane and the jib. Then, these parts are attached to the mast. The mobile crane next adds counterweights. Forklifts and crawler cranes could be some of the other industrial equipment that is commonly used to erect a crane. Mast extensions are added to the crane when the building is erected. This is how the height of the crane could match the building's height. The crane crew utilizes what is referred to as a climbing frame or a top climber that fits between the slewing unit and the top of the mast. A weight is hung on the jib by the work crew so as to balance the counterweight. Once complete, the slewing unit is able to detach from the top of the mast. In the top climber, hydraulic rams are used to adjust the slewing unit up an extra 6.1m or 20 feet. Then, the operator of the crane uses the crane to insert and bolt into position one more mast part piece.