

1. The use of a mobile crane

A mobile crane is carried in timely according to progress of a construction site, and is used for lifting and the displacement work of a load. After jutting out an outrigger and securing stability, expansion and contraction of a boom, and ups and downs and turning are performed, and a load is hung and lifted on a hook of the wire rope which it let out from the boom. A boom expands and contracts about a maximum of 60m by a model, it hangs by combined use of ups and downs and turning, and a load is moved. Appearance (Boom storing posture) is shown in Fig. 1.

2. The function of a work-area-controller

There are various obstacle, such as an electric wire and adjoining building, in a construction site. The crane operator has paid attention most to the load, and there is a possibility of making it contacting without noticing a boom and a obstacle an approximation. When a boom approaches a obstacle, it is the work-area-controller which is made to suspend a crane automatically and prevents contact. Before work, a crane is operated and the location of the obstacle of a construction site is registered into a work-area-controller. Boom derrick angles, slewing angles, operating radiuses, and boom heights can be registered.

3. Development history of crane with work-area-controller

We developed the controller of microcomputer loading and put the crane with a work-area-controller on the market in 1986. Although popularity was acquired at the beginning, the subject has also gone up as it is used. As a material subject, when the operation velocity was quick, it might hang at the time of discontinuance and the load might sway greatly. In a narrow spot, there was a possibility of inducing new risk with the deflection. On the other hand, there was also an upswing demand in crane operativity. Adopting the remote control valve of an oil-pressure pilot control as an operation system, and reducing control force was also advancing. By carrying out computer control of the pilot circuit, it was made to slow down beforehand before discontinuance, and it became possible to reduce deflection. Sale opening of the crane which was decelerated before discontinuance and raised safety is carried out from 1995, and adding a betterment has been continued.

4. Improvement in efficiency, a product life cycle

By preventing contact of a boom and a obstacle, fatigue of an operator has been able to be reduced and it has been able to use for the betterment of working efficiency, and the upswing in safety. By preventing contact, it has led also to the upswing in a product life cycle. Although 12t - 550t crane has been produced now, adoption was difficult for a cost to small size. However, a risk of a small model and a large-sized model receiving risk is the same. Then, it has carried in all models. For us, offer of safety work is an eternal subject matter. We have to continue making it have to grow up to be a safe crane that it is further easy to use.

5. Sales performance, market share

In the 04 fiscal year (April, 2004 - March, 2005)

Proceeds	45,764 million yen
Home share	49.2%
World share	23.7%

