IMPROVEMENT OF ACCROPODE PRODUCTION PROCESS

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ABSTRACT: Accropode production is very difficult, and the quality requirement is high. Based on the technology improve on integral steel template to precast accropode, many problems have be solved during the accropode construction. For example, the air bubble on the slope and slurry bubble on the bottom disappear. Based on improving sling tools, the blocks will not be shattered during the loading and unloading process. The closed circulating water way is used to maintenance, and that can reduce the cost and overcome the construction of a variety of adverse factors, greatly improve the efficiency of construction and schedule, quality, appearance beautiful, ensure high quality smooth accropode.

Keywords: Stop pulp, maintenance, hoisting rigging, construction technology.

INTRODUCTION

The Engineering General Situation

Countries are to develop the tianjin port now, especially the sea land building cofferdam project adopts 3 t torsional slope embankment structure, blocks of king king twisted block structure solid for plain concrete, twisted the king word block length x width x height size is 1581 * 1581 * 1581 mm, piece of concrete is 1.32 square, concrete strength grade for C30F250.

Bottom Tire Arrangement

Fig 1. The Bottom Layout

King twisted block bottom tire template layout type staggered arrangement, the arrangement type covers an area of less.

CONSTRUCTION TECHNOLOGY AND PROCEDURE

The steel template vertical precast technology, before the construction of the bottom die on the debris to clean up, the template of joint processing good polishing rust, put in the laying of concrete stand on the side of geotextile, paste grouting, the template fastening bolt connection, using the 25t truck crane supporting formwork lifting hopper, play ash. Concrete is composed of the upper four layers of ash (each 40cm layer), the construction personnel is vibrated in the steel platform, after stripping wrapped by plastic cloth, maintenance, transportation and storage area.

(1) Supporting formwork of qualified, by 25t cars hanging ash concrete casting, degree of control in the 5~7cm concrete slump, is divided into four steps of pouring, strict control of the first step and the third step play ash position, need high slope, so as to avoid the component surface Cracks.

Fig 2. The concrete step pouring diagram

(2) Vibration: operator stations in the movable steel platform using 50mm plug-in vibrators, the hanging rod vibrating slope surface, the slope surface bubble are fully discharged.

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Fig 3. The Vibration of Concrete

(3) Surface: the concrete surface, the top cover wet geotextile, after stripping timely repair, and the use of plastic package for nature conservation.

(4) Shipment and storage and maintenance

When the Accropode meet the design and specification of strength, use the 25t crane to lift from the bottom formwork, using self do wire lock lifting, transport and storage space, storage of not more than three layer, continue to cover the geotextile and sprinkling water conservation, accumulated up to 28 days.

THE EXIST PROBLEMS AND IMPROVEMENT MEASURES IN CONSTRUCTION

(1) The problems in construction process
- The concrete pouring, component existed leakage phenomenon.
- After template removal, component slope has obvious bubble.
- Components shipped, sling due to uneven stress caused damage, upper corner.
- The limited water resources, only the water carriers transporting, unable to meet the demand and conservation of water, causing water loss.
- After pouring component top cracks, the hanging angle phenomenon.

(2) The following improvement measures to solve the above problems.
- Through continuous improvement, using the template bottom opening shop three layers of non-woven fabrics, its a layer of plastic sheeting method, ensure strict template under the mouth, grouting effect is good.

- The hanging rod vibration, ash four layer control, ensure that the vibration in place, “quick slow out” method, from one side to the other side in order to vibration, until no bubble elimination.

- The improved lifting: a sling, easily damaged, use about 200 times. Using wire rope wrapped around the geotextile material, reducing the damage and friction of concrete component, and save the cost, and strictly control the Accropode tank strength, reach 75% before shipment.

- Sealed pack maintenance use plastic cloth, to cycle maintenance function, avoid the sprinkler caused water waste, thereby saving cost.

Fig 4. The laying of the geotextile

Fig 5. Hanging rod vibration

Fig 6. Improvement of the spreader

Fig 7. Package plastic cloth maintenance
• Avoid vibrator vibration, adjust the upper concrete slump ≤ 5cm; stripping the top wire, both sides at the same time the force to open the top template, avoid edges and corners destruction.

SUMMARY
For precast twist king word piece of technology was improved, overcome various unfavorable factors in the construction and the construction efficiency, progress is more ideal, quality and beautiful appearance, and in the process of shipment handling, avoid knock against drop Angle phenomenon. Through careful construction, quality has maintained a high level, get praise the owner, supervision unit, to lay a solid foundation for the follow-up of prefabricated construction.