



The Main Measures of Typhoon Prevention and Control for the Long Span Highway Bridge-and-Tunnels

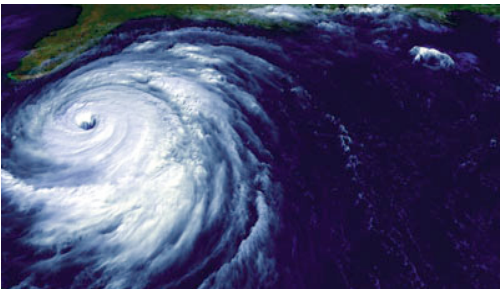




侵入中国的台风路径



China is located in the east of the Eurasian continent and faces the Pacific on the east, significantly affected by the typhoon. There are over 20 typhoons per year that affect China's coastal areas, and about 8 to 10 make landfall every year.





The Qingdao Jiaozhou Bay Bridge

With the rapid development of China's economic society and the improvement of bridge construction technology, the long span highway bridge-and-tunnels in the east coast regions are increasing, and the task of typhoon prevention and control is increasingly heavy.



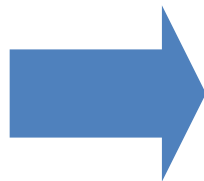
The Hangzhou Bay Bridge



The Zhenjiang Subsea Tunnel



Strengthen the resistance to the typhoons comprehensively ,and highlight the key links, such as “Preventing, Avoiding, snatching, Rescue”



- 1、 Fulfill the security responsibility ;**
- 2、 Deepen the hidden danger investigation;**
- 3、 Strengthen the early warning and prevention;**
- 4、 Constitute emergency plans scientifically;**
- 5、 Refine the countermeasures.**





1. Fulfill the responsibility for security, especially the management and maintenance responsibility

The Ministry of transport promulgates *The maintenance management institution of highway bridge.*

Clarify and definite the responsibility of the bridge management unit, the bridge intendance unit and the bridge engineer.

Unified leadership

Graded responsibility

Unanimous administration

Clear power and responsibility



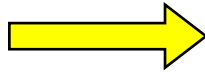


2. Deepen the latent danger investigation and management, eliminate hidden danger in advance

Launch the latent danger investigation and management in all aspects



The focus of the investigation



- The job sites of the long span bridge and tunnel in construction;
- The long span bridge and tunnel in disaster prone areas;
- The long span bridge and tunnel sections which is near the river, near the mountain , under high embankment, under low embankment or subjected to the washout.



3. Strengthen the early warning and the prevention, obtain and release the early warning information

- Establish the information sharing mechanism with the meteorological department, the marine department and so on;
- Establish the modern information monitoring and acquisition system;
- Establish the effective channels of information distribution.





4. **Constitute scientifically the contingency plan and prepare adequately for the contingency operation**

- **Constitute the contingency plan scientifically;**
- **Establish the emergency rescue team;**
- **Reserve the necessary emergency supplies.**





5. Refine the countermeasures to guarantee the operation safety of the bridge and tunnel during the typhoon

The bridge and tunnel in construction



- Arrange scientifically the engineering construction. Carry out construction operation generally except emergency work and necessary safety monitoring and inspection proceeding.
- For the striking influence area of typhoon, start the contingency plan in time, transform the constructors and the important equipment, and reinforce the important facilities.



5. Refine the countermeasures to guarantee the bridge and tunnel operation safety during the typhoon

The bridge and tunnel in operation



- Enhance the regular and periodic inspection of the bridge and tunnel, and implement real-time monitoring of the important bridge and tunnel.
- Organize the maintenance and management unit cooperating with the traffic management department of the police to implement the traffic control when necessary to guarantee the safety of the bridge, the tunnel and the running vehicle.



Thanks!

