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Workshop case example

SEGMENT

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We are represented in several countries, through agents and associates. We have carried out work for local companies and for multinational companies. We have considerable experience within the industry of protective coatings, but we have also carried out work for advertising agents.

Introduction: Wuhan Design Institute (WDI) is a Chinese design institute placed in Wuhan (China). They are world renowned for their designs of large bridges, both in China and in other countries and they are often used as consultants for other design institutes or Western engineering companies. Their expertise are mainly on suspension bridges and cable stayed bridges especially over the Yangtze river in China, but they have also participated in a number of railway bridges mainly of the truss construction type. They were involved as consultants for the Chai Yan Ba Bridge in Chongqing, which was coated with a polysiloxane topcoat.
They are known to dig deep into the various technologies and to put a lot of emphasis on the economy of the various solutions applied to their bridges. On the other hand they are very receptive for technical arguments and they like to be informed about new developments and innovations.

WDI has presently 3 major projects and you have already had the possibility to talk to them and to explain that you have some new ideas and that you can be a competent partner in their projects. They have now given you the following information about their projects and you have been invited to give a presentation about what you would do about their projects. You therefore have to prepare a presentation that will keep the door open and create sufficient interest from WDI to make them put you on the shortlist for these three projects and consider you in the next step of the projects

1) A highway bridge on the Yangtze River in China.

It will be 800 meters span and constructed as steel box girders with steel pylons of a similar type as those used for the Nanjing No. 3 Bridge. The approach roads and the pillars for that are made from concrete including the immersed part of the pillars. They are looking for 24 years of lifetime before major maintenance and they are talking about a guarantee. They claim that they are using as a design parameter the cost of corrosion protection per square meter per year and that they would like to compare various solutions from a lifecycle point of view.
They would like to know:

- **What is an optimum paint specification for the bridge in case.**
- **What specification would you propose for the**



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underwater part of the concrete pillars and how to maintain them ?

- What specification would you suggest for the pylons and do you have a bolt certificate for the friction bolts?
- Should the concrete in the air be painted and with which systems ?
- How should the interior of the box girder sections be treated ?
- Which kind of assistance can you give to the construction yard ?
- What is your experience with similar bridges ?
- What kind of new technology will be relevant for this bridge ?
- How should they treat the galvanized handrails on the bridge ?

2) A railway bridge of the truss type construction.

This bridge is going to be exported to Indonesia and the bridge sections will be shipped to Indonesia where they will be assembled to connect two large islands by means of a railway. They demand a 22 years lifetime before major maintenance. Since this project is very cost consciously orientated it should be very cost effective. Because of the long transportation at sea of the sections they are thinking of applying the topcoat just before erection in Indonesia. Furthermore they are looking for a solution that is very resistant to long exposure of cyclic stresses in a marine environment.

They would like to know:

- What is an optimum paint specification for the bridge in case?
- What specification would you propose for the underwater part of the concrete pillars and how to maintain them?
- Which kind of assistance can you give to the construction yard?
- Which kind of assistance can you give on site in Indonesia?
- What is your experience with similar bridges?
- What is the best way for the coating to cope

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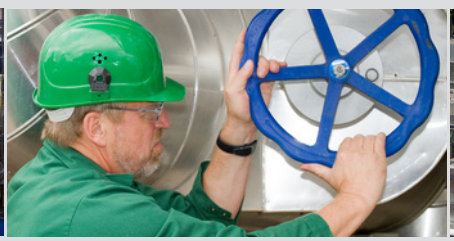
with cyclic stresses?

- What kind of new technology can you offer for this bridge?

3) A maintenance project over the River Thames in London - Tower Bridge.

London is preparing for the next Olympics after Beijing and therefore it has been decided that several of the landmark bridges over the river Thames are going to be maintained to appear in a pristine condition for the Olympics. This is a very prestigious project and they want to be sure that everything is absolutely perfect. For such a bridge you must consider the environmental impact and VOC is important. It is also very important that you have the required certificates and approvals. For this project they want to know the following:

- What is an optimum paint specification for the bridge in case?
- Which kind of assistance can you give on site in London?
- What is your experience with similar bridges?
- What kind of new technology can you offer for this bridge?
- Have you done similar projects in the UK?
- What is the best solution for the exterior steel and which has the lowest impact on the environment?



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