INTERVENTION WORK: D4/1 REHABILITATION OF INSPECTION GANTRY AND RAILS

The item covers the following activities:

- procurement, transport,storage and handling of related materials and equipment;
- surface preparation using power tool cleaning with containment and transport of the removal material to an approved dump area;
- application of epoxy primer and polyurethane finish coats using airless spray;

It is proposed a purchase of a by-bridge to bridge maintenance work with a maxim payload of platform of 600Kg.

DETERIORATION:



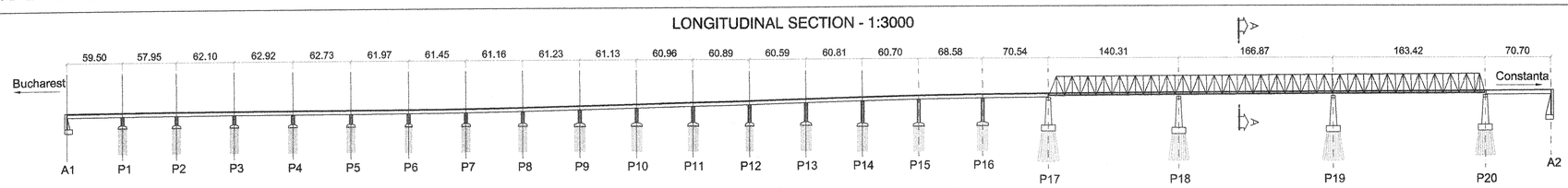
Corroded and damaged inspection gantry

IVANESCU T. TUDOR INGINER VERIFICATOR PROIECTE NR. 445 ROMANIA MLPAT 2012

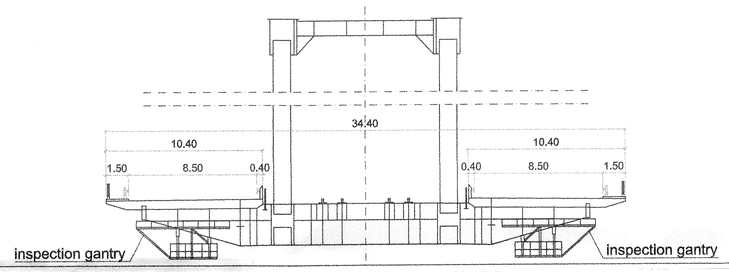
14-11-2008

GENERAL VIEWS

LONGITUDINAL SECTION - 1:3000



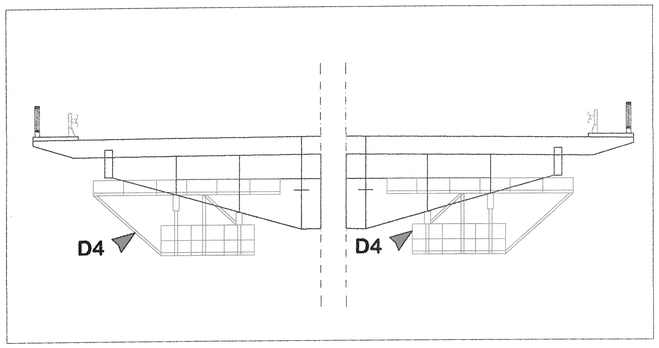
BRIDGE TRANSVERSAL SECTION (A-A) - 1:200



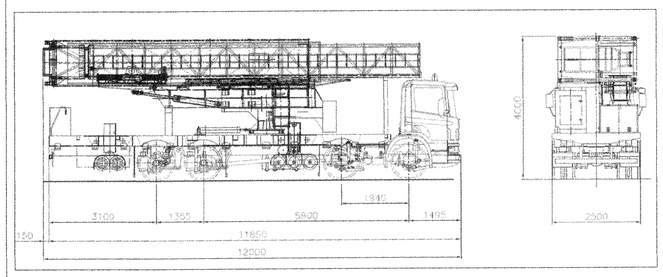
WORKING CODE LIST

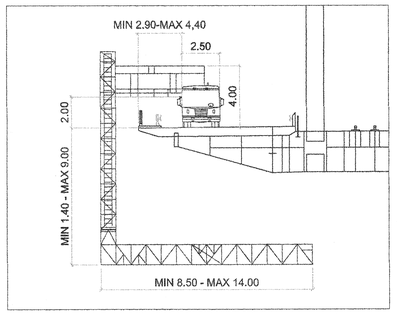
CODE	MAINTENANCE AND REHABILITATION WORKS	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
	ROAD FINISHES AND EQUIPMENT										
A1	Painting of pedestrian parapet										
A2	Replacement of pedestrian parapet										
A3	Guard rail replacement										
A4	Electrical equipment replacement										
A5	Walkway slab substitution										
	PAVEMENTS										
B1	Roadway pavement and waterproofing replacement										
B2	Roadway superficial drainage rehabilitation										
B3	Walkway pavement replacement										
B4	Expansion joints replacement										
B5	Bearings replacement										
	CONCRETE REPAIR										
C1	Deck slab repair										
C2	Prestressed concrete beams repair										
C3	Pier caps concrete repair										
C4	Piers concrete repair										
C5	Tower leg concrete repair										
C6	Structural strengthening										
C7	Superstructure replacement										
	STEEL WORKS										
D1	Painting of steel structures										
D2	Stay cables maintenance										
D3	Strengthen of anchor bolts										
D4	Rehabilitation of inspection gantry and rails							■			
	EARTHWORKS										
E1	Ashlar stoneworks repair										
E2	Repair of strutture connection with embankment										
E3	Cone quarters rehabilitation										
E4	Rehabilitation of storm water collecting system										
E5	River bank improvement										

INTERVENTION DETAILS



INTERVENTION ON BRIDGE INSPECTION GANTRY - 1:100





INTERVENTION SEQUENCE:
1- Surface preparation: power tool cleaning SSPC-SP3;
2- Coating program: application of epoxy zinc primer and polyurethane finish coats using airless spray.

Power Tool Cleaning SSPC-SP3:
Removes loose rust, loose mill scale and loose paint. Intact materials may remain. Power tools use electrical and pneumatic equipment to provide faster cleaning. They include sanders, wire brushes or wheels, chipping hammers, scalers, rotating flaps (rotopeen), needle guns and right angle or disk grinders.
Cleaning metal surfaces is less expensive using power tools than using hand tools. In addition, power tool cleaning generally requires much less stringent containment and produces less waste than abrasive blast cleaning.
Thus, power tools are used frequently for spot cleaning of damaged coatings, where contamination of adjacent areas by abrasive is unacceptable.

Primer - Intercure 200 HS:
A two component, high solids, low VOC, epoxy zinc phosphate/ micaceous iron oxide primer offering excellent barrier protection, low temperature cure and rapid overcoating properties.
Intercure 200 HS is preferred for use with systems for chemical environments where zinc based materials can be subject to attack in both acid and alkaline conditions.

Finish Coat - Interthane 990:
A two component acrylic polyurethane finish giving durability and long term recoatability.
Level of sheen and surface finish is dependent on application method. Avoid using a mixture of application methods whenever possible. Best results in terms of gloss and appearance will always be obtained with conventional airless spray application.

INTERVENTION AND PRODUCTS DESCRIPTION

A) COMPONENTS OF EQUIPMENT

- Subframe coupled to the vehicle's chassis, for the distribution of the concentrated loads.
- No.2 wheel-type stabilizing trolleys mounted on the right side of the vehicle (launching side) for the stabilization of the unit, which get extended down to the ground by means of hydraulic control prior to starting equipment operation.
- Counterweights on chassis body, to ensure stability of the unit during equipment operation.
- Vertical pedestal, rotating of 90 degrees on chassis turntable towards the right side of the vehicle (launching side) by means of hydraulic cylinder.
- Pedestal counterweight, to ensure further stability of the unit against tipping moments.
- Horizontal boom to support the cantilever structures, of telescopic type, which extends by means of hydraulic cylinder permitting this way to clear bridge sidewalks up to 4.40 m. width and to clear bridge barrier up to 2.0 m. height.
- Vertical slideway for the sliding of the tower up and down.
- Vertical tower, sliding up and low on special pads of low-friction type.
- Rotating tower, mounted on a turntable which permits the platform to swing 180° underbridge.
- Horizontal platform, composed of no.1 fixed section (the prime working platform, made from steel) and no.1 sliding section (the telescopic working platform, made of aluminium).
- Assistant ladder mounted on platform, sliding manually on top the handrail of the telescopic section of platform, which consents to raise no.1 operator (120 Kg.) up to 3.0 m. height (5.0 m. working height) above main ABC platform floor for enabling access of personnel inside the girders for inspection of bridge soffits.
  The assistant ladder remains stowed in rest position inside the platform at the end of operations.

BY-BRIDGE BARIN ABC 140/LS WITH SCANIA 8*2 380 HP TRUCK CHASSIS

INVESTOR/INVESTITOR

ROMANIAN NATIONAL COMPANY OF MOTORWAYS AND NATIONAL ROADS
COMPANIA NATIONALA DE AUTOSTRAZI SI DRUMURI NATIONALE DIN ROMANIA

DESIGNER/PROIECTANT

LOUIS BERGER GROUP inc.

CONSULTING SERVICES FOR DESIGN AND WORKS SUPERVISION OF 10 BRIDGES IN DOBROGEA AREA

TECHNICAL DESIGN

B07-BRIDGE A2 CERNAVODA

TD - B07 - 12

DESIGN TEAM LEADER
Vittorio Ascoli Marcheselli

ORDINE DEGLI INGEGNERI DELLA PROVINCIA DI ASCOLI PICENO N° 12645

STEEL WORKS

CONSULTANTS
SOLIDUS s.r.l. - Roma Italia
Francesco Del Tosto
Romano Tucci

D4/1
REHABILITATION OF INSPECTION GANTRY AND RAILS

scale	various	file name TD - B07 - 12				
data / date	rev.	revision title	des	ver/chk	CP / PC	APPR. AUTHORITY
08 aug 2008	0	issue	SOLIDUS	ASCOLI		