



SWLUP&C-S Technology System Application

Design data for repair and reinforcement of piping, fittings and equipment.

FORM 01-VSTK-08-24

i Please complete this form **in block capitals**. If a value is unknown, write “**unknown**”; if it has not been verified, write “**assumed**”. Send the scanned form, together with photos and analyses, to **info@vstktechnology.com**.

1 GENERAL INFORMATION

CONTACT	VSTK – PROJECT NO.
EMAIL	ENGINEERING ORDER NO.
MOBILE	REVISION NO.
CLIENT	ENGINEERING SUPPORT
SITE	TECHNICIAN NAME
DATE	ECONOMIC PROJECT DETAIL
PLANT AREA	INSTALLATION DATE
LOCATION	SYSTEM APPLIED BY
LINE NO.	REQUIRED DESIGN LIFE
DATE COMPONENT WAS APPLIED (IF KNOWN)	

2 COMPONENT DETAILS

COMPONENT	DIAMETER	ORIGINAL WALL	UNIT	SERVICE LIFE	UNIT	QTY.	MATERIAL	GRADE
Pipe								
Elbow								
Tee								
Reducer								
Flange								
Valve								
Tank								
Heat exchanger								
Others								

REFERENCE MATERIALS

Carbon steel

Stainless steel

Duplex

Super-duplex

A333 Gr. 6

GRP

GRE

Others



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3 DESIGN CONDITIONS

CONDITION	REQUIRED DESIGN SYSTEM		CALCULATED REPAIR DESIGN		UNIT
	MAX.	MIN.	MAX.	MIN.	
Design temperature					
Operating temperature					
Design pressure					
Operating pressure					
Pressure test					

4 EXTERNAL LOADS state if applicable (*2)

LOAD	APPLICABLE?	MAX.	MIN.	UNIT
Axial load	☐ Yes ☐ No			
Bending moment	☐ Yes ☐ No			
Shear load	☐ Yes ☐ No			
Torsion	☐ Yes ☐ No			
Cyclic pressure ^(*3)	☐ Yes ☐ No			

(*2) External loads generally do not affect the repair design when the line mainly carries internal pressure. Loads will be included in the repair assessment if specified.

(*3) Pressure cycles need only be considered if the number of cycles will exceed 7,000.

5 DEFECT

CAUSE OF DEFECT ☐ External corrosion ☐ Internal corrosion ☐ Internal erosion ☐ Erosion / corrosion ☐ Impact ☐ Vibration ☐ Other: _____		NATURE OF DEFECT ☐ Wall loss ☐ Pitting ☐ Through-hole ☐ Dent ☐ Gouge ☐ Crack ☐ Other: _____	
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DEFECT SIZE	DIAMETER	AXIAL	DEPTH	QUANTITY
Current				
At end of repair life				

IS THE DEFECT LEAKING? ☐ Yes ☐ No	IS LEAKAGE EXPECTED DURING THE REPAIR LIFE? ☐ Yes ☐ No
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6 LINE CONTENTS

N°	LINE CONTENTS – SELECT 1, 2 OR 3	✓
1	Not safety-critical (static / drain / cooling line)	☐
2	Firewater line, excluding hydrocarbon traces	☐
3	Water / hydrocarbon / flammable / gas line	☐

CHEMICAL DETAIL – COMPOUND	%

CONTAINS ABRASIVE / EROSIVE PARTICLES?		PROPORTION
☐ Yes ☐ No		
IS THE PH BETWEEN 3.5 AND 11?		CONTAINS STRONG SOLVENT? (METHANOL / GLYCOL / BENZENE / TOLUENE / SULPHURIC)
☐ Yes ☐ No		☐ Yes ☐ No

7 PERMITTED SURFACE PREPARATION *by defect location*

SURFACE PREPARATION METHOD	AT DEFECT (LOCAL)	AWAY FROM DEFECT
Grit blasting (SSPC-SP10)	☐	☐
Bronze brushing (Sa 2½)	☐	☐
Cold sanding (Sa 2½)	☐	☐
Power tool (St3 / SSPC-SP3)	☐	☐
Hand tool (St2 / SSPC-SP2)	☐	☐
Wash and degrease only	☐	☐

8 EXPECTED CONDITIONS DURING INSTALLATION

LINE STATUS
☐ Shut down ☐ Reduced load ☐ In service

CONDITION	MAX.	MIN.	UNIT
Surface temperature			
Pressure			

CONDENSATION PRESENT AT TIME OF INSTALLATION?	CAN THE REPAIR BE HEATED ONCE INSTALLED?
☐ Yes ☐ No	☐ Yes ☐ No
SYSTEM CANNOT BE DRAINED DURING APPLICATION?	
☐ Yes ☐ No	

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1. Provide information on site inspections carried out: date, photographs and system drawings.
2. Describe any access restrictions and/or whether the installation area is close to other lines or equipment to be considered.
3. Where no specific answer has been given to any of the data requested above, it will be assumed that no design or precautionary requirement exists.
4. Email this form to the requester, or call beforehand if you have any questions.