



**DS05 TEST TRAIN -MECHANICAL DATA SHEET FOR
CHEMICAL TRANSFER PUMPS PACKAGE**

**DS05-536-P008 A/B
(CORROSION INHIBITOR TRANSFER PUMPS)**

JOB No.	0188CP
DOCUMENT No.	REV
0188CP-N-DG-DG05-ME-DAS-1002	
PAGE	OF

REVISION

1 APPLICABLE TO: PROPOSAL PURCHASE AS BUILT

2 FOR: ROO UNIT DS05-536-P008A/B

3 SITE: DS05 Test Train, Rumaila Oilfield (North), Iraq NO. OF PUMPS REQUIRED 2

4 SERVICE: Corrosion Inhibitor Transfer Pump TYPE / MODEL Centrifugal / STA

5 MANUFACTURER STA SERIAL NO. STA

6 Installation: horizontal vertical

7 Duty: continuous batch other flooded self priming submersible (note-2)

8 Location: outdoor exposed to elements under shelter Electrical area classification: Zone 2, Gas Gr IIB, T3

9 indoor heated unheated Category: Criticality Rating: 3

10 HANDED PRODUCTS REQUIRED OPERATING DATA (per pump)

11 Fluid: Refer MSDS for Liquid CRW85282 Flow (m3/h): min: 0.9 normal: 3.0 rated: 3.0

12 corrosive abrasive explosive flammable toxic other: Discharge pressure (bar g.): rated: 1.86

13 Gas content: No yes Suction pressure (bar g.): normal: 0 max: 0.26

14 Solids content: No yes Differential pressure (bar): rated: 1.61

15 Pumping temperature Tp (°C): min: normal: 2 to 53 °C max: Differential head (m): rated: 16.07

16 Specific gravity: at Tp mini: normal: 1.02 to 1.04 @15.6°C max: Available NPSH (m): Min: 12.1

17 Dynamic viscosity (cP): at Tp mini: normal: 10 @ 40°C max: Start-up conditions:

18 Vapour pressure (bar a.): at Tp normal: 0.032 max: Dry run requirements: (Note 3)

19 Atmospheric boiling temperature (°C): Parallel/ series operation:

20 Specific heat (kJ/ kg/ °C): Basic material (wetted parts):

21 PERFORMANCE DRIVERS (Refer Note LV9)

23 Proposal Curve No.: STA Motor: (Refer to notes for motor on page 5)

24 Rated Speed: STA Head @ rated Capacity: STA Manufacturer: STA Rated KW: STA

25 Max Head @ rated impeller: STA Type STA Rated speed: STA

26 Max Power @rated impeller: STA Frame no. STA Ingress Protection IP55

27 NPSHR: STA Constant Speed Variable Speed Rated Current

28 Suction Specific Speed: STA Type of protection: Ex d Enclosure:

29 Rated voltage: 400V +/- 5% Frequency, hertz: 50 Hz +/- 1% Service Factor: STA

30 PHASE: 3 Power Factor: STA

31 Insulation: Not Applicable

32 SITE AND UTILITY DATA CONSTRUCTION

33 Range Of Ambient Temps (Min/Max): -2 / 53 °C (Note- 1, 8)

34 Relative Humidity (Min / Max): 3 / 32 %

35 Unusual conditions: Dust And Sand Storm

36 Electricity: Voltage 400 V AC +/- 5%

37 Phase 3

38 Hertz 50 Hz +/- 1%

39 Instrument air: Max Min

40 Max Allow work Press @: STA (Remak - 1)

41 Hydrotest Press: STA

42 Casing Mounting: STA

43 MATERIAL (Note 10) Coupling

44 Case: SS 316L Manufacturer: STA

45 Impeller: SS 316L Type: STA

46 Wearing: STA Model: STA

47 Shaft: STA Driver Half Coupling mounted by: Pump Mfg

48 Sleeve: STA

49 Base Plate: STA

50 INSPECTION AND TESTING Bearing Type: STA Weight Data: STA

51 Wit Non Wit Observe Bearing No: STA Pump: STA

52 Hydrostatic Seal Type /Model: STA Motor: STA

53 Performance Test Seal Mfg: STA Baseplate: STA

54 Shop Inspection (Witnessed) Total: STA

55 Material Certification

56 Dismantle and Inspection After Test

57 Magnetic Particle

58 Dye Penetrant

59 Radiographic

60 Ultrasonic

61 Applicable Standard and Code

62 REMARKS: API /ASME

63 1. Design Conditions: Design pressure will be confirmed based on pump shut off pressure, Design Temperature = -2 °C/85 °C.

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MECHANICAL DATASHEET FOR DS05 TEST TRAIN CHEMICAL TRANSFER PUMPS

DS05-536-P009 A/B (DEMULSIFIER TRANSFER PUMPS)

JOB No.	0188CP
DOCUMENT No.	REV
0188CP-N-DG-DG05-ME-DAS-1002	
PAGE	OF

REVISION

1 APPLICABLE TO: PROPOSAL PURCHASE AS BUILT

2 FOR: ROO UNIT DS05-536-P009A/B

3 SITE: DS05 Test Train, Rumaila Oilfield (North), Iraq NO. OF PUMPS REQUIRED 2

4 SERVICE: Demulsifier Transfer Pump TYPE / MODEL Centrifugal / STA

5 MANUFACTURER STA SERIAL NO. STA

6 Installation: horizontal vertical flooded self priming submersible (Note-2)

7 Duty: continuous batch other Electrical area classification: Zone 2, Gas Gr IIB, T3

8 Location: outdoor exposed to elements under shelter Category: Criticality Rating: 3

9 indoor heated unheated

10 HANDLED PRODUCTS REQUIRED OPERATING DATA (per pump)

11 Fluid: Refer MSDS for Liquid RP6000Q Flow (m3/h): min: 0.9 ^{Sub} normal: 3.0 rated: 3.0

12 corrosive abrasive explosive flammable toxic other: Discharge pressure (bar g.): rated: 1.78

13 Gas content: No yes Suction pressure (bar g.): normal: 0 max: 0.24

14 Solids content: No yes Differential pressure (bar): rated: 1.55

15 Pumping temperature Tp (°C): min: normal: 2 to 53 max: Differential head (m): rated: 17.53

16 Specific gravity: at Tp mini: normal: 0.9 to 0.995 @ 15.6°C max: Available NPSH (m): min: 12.7

17 Dynamic viscosity (cP): at Tp mini: normal: 13 to 45 @ 40°C max: Start-up conditions:

18 Vapour pressure (bar a.): at Tp normal: 0.0068 max: Dry run requirements: (Note 3)

19 Atmospheric boiling temperature (°C): Parallel/ series operation:

20 Specific heat (kJ/ kg/ °C): Basic material (wetted parts):

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22 PERFORMANCE DRIVERS (Refer Note LV9)

23 Proposal Curve No.: STA Motor: (Refer to notes for motor on page 5)

24 Rated Speed: STA Head @ rated Capacity: STA Manufacturer: STA Rated KW: STA

25 Rated Power: STA Efficiency (%): STA Type: STA Rated speed: STA

26 Max Head @ rated impeller: STA Impeller Dia Rated /Min: STA Frame no.: STA Ingress Protection IP55

27 Max Power @ rated impeller: STA Constant Speed Variable Speed Rated Current

28 NPSHR: STA Type of protection: Ex d

29 Suction Specific Speed: STA Rated voltage: 400V +/- 5% Enclosure:

30 Frequency, hertz: 50 Hz +/- 1% Service Factor: STA

31 PHASE: 3 Power Factor: STA

32 Insulation: Not Applicable

33 SITE AND UTILITY DATA CONSTRUCTION

34 Range Of Ambient Temps (Min/Max): -2 / 53 °C (Note-1,8)

35 Relative Humidity (Min / Max): 3 / 32 %

36 Unusual conditions: Dust And Sand Storm

37 Electricity:

38 Voltage: 400 V AC +/- 5%

39 Phase: 3

40 Hertz: 50 Hz +/- 1%

41 Instrument air:

42 Max Min

43 MATERIAL (Note 10)

44 Case: SS 316L

45 Impeller: SS 316L

46 Wearing: STA

47 Shaft: STA

48 Sleeve: STA

49 Base Plate: STA

50 INSPECTION AND TESTING

51 Hydrostatic Wit Non Wit Observe

52 Performance Test

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54 Shop Inspection (Witnessed)

55 Material Certification

56 Dismantle and Inspection After Test

57 Magnetic Particle

58 Dye Penetrant

59 Radiographic

60 Ultrasonic

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62 REMARKS:

63 1. Design Conditions: Design pressure will be confirmed based on pump shut off pressure, Design Temperature = -2°C / 85°C.

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1	APPLICABLE TO: <input type="radio"/> PROPOSAL <input checked="" type="radio"/> PURCHASE <input type="radio"/> AS BUILT
2	FOR: ROO UNIT DS05-536-P010 A/B
3	SITE: DS05 Test Train, Rumaila Oilfield (North), Iraq NO. OF PUMPS REQUIRED 2
4	SERVICE: Oxygen Scavenger Transfer Pump TYPE / MODEL Centrifugal / STA
5	MANUFACTURER STA SERIAL NO. STA

6			Installation: <input type="checkbox"/> horizontal <input type="checkbox"/> vertical
7	Duty: <input type="checkbox"/> continuous <input checked="" type="checkbox"/> batch <input type="checkbox"/> other	<input type="checkbox"/> flooded <input checked="" type="checkbox"/> self priming <input type="checkbox"/> submersible (note-2)	
8	Location: <input checked="" type="checkbox"/> outdoor <input type="checkbox"/> exposed to elements <input type="checkbox"/> under shelter	Electrical area classification: Zone 2, Gas Gr IIB, T3	
9	<input type="checkbox"/> indoor <input type="checkbox"/> heated <input checked="" type="checkbox"/> unheated	Category: Criticality Rating: 3	

10	HANDLED PRODUCTS	REQUIRED OPERATING DATA (per pump)
11	Fluid: Refer MSDS for Liquid OSW80490	Flow (m3/h): min: 0.9 normal: 3.0 rated: 3.0
12	<input type="checkbox"/> corrosive <input type="checkbox"/> abrasive <input type="checkbox"/> explosive <input type="checkbox"/> flammable <input checked="" type="checkbox"/> toxic <input type="checkbox"/> Other:	Discharge pressure (bar g.): rated: 1.74
13	Gas content: <input checked="" type="checkbox"/> No <input type="checkbox"/> yes	Suction pressure (bar g.): normal: 0 max: 0.31
14	Solids content: <input checked="" type="checkbox"/> No <input type="checkbox"/> yes	Differential pressure (bar): rated: 1.43
15	Pumping temperature Tp (°C): min: normal: 2 to 53 max:	Differential head (m): rated: 10.73
16	Specific gravity: at Tp mini: normal: 1.36 to 1.39 @20°C max:	Available NPSH (m): min: 9.5
17	Dynamic viscosity (cP): at Tp mini: normal: 2.17 to 12 @20°C max:	Start-up conditions:
18	Vapour pressure (bar a.): at Tp normal: 0.032 @ 25°C max:	Dry run requirements: (Note 3)
19	Atmospheric boiling temperature (°C):	Parallel/ series operation:
20	Specific heat (kJ/ kg/ °C):	Basic material (wetted parts):

22	PERFORMANCE	DRIVERS (Refer Note LV9)
23	Proposal Curve No.: STA	Motor: (Refer to notes for motor on page 5)
24	Rated Speed: STA Head @ rated Capacity: STA	<input checked="" type="checkbox"/> Manufacturer: STA <input checked="" type="checkbox"/> Rated KW: STA
25	Rated Power: STA Efficiency (%): STA	<input checked="" type="checkbox"/> Type: STA <input checked="" type="checkbox"/> Rated speed: STA
26	Max Head @ rated impeller: STA Impeller Dia Rated /Min: STA	<input checked="" type="checkbox"/> Frame no.: STA <input checked="" type="checkbox"/> Ingress Protection IP55
27	Max Power @rated impeller: STA	<input checked="" type="checkbox"/> Constant Speed <input type="checkbox"/> Variable Speed
28	NPSHR: STA	<input checked="" type="checkbox"/> Type of protection: Ex d
29	Suction Specific Speed: STA	<input type="checkbox"/> Rated voltage: 400V +/- 5%
30	SITE AND UTILITY DATA	Frequency, hertz: 50 Hz +/- 1%
31	Range Of Ambient Temps (Min/Max): -2 / 53 °C (Note-1,8)	Enclosure: STA
32	Relative Humidity (Min / Max): 3 / 32 %	Service Factor: STA
33	Unusual conditions: Dust And Sand Storm	PHASE: 3 Power Factor: STA
34	Electricity:	Insulation: Not Applicable
35	Voltage: 400 V AC +/- 5%	
36	Phase: 3	
37	Hertz: 50 Hz +/- 1%	
38	Instrument air:	
39	Max Min	

30	SITE AND UTILITY DATA	CONSTRUCTION
31	Range Of Ambient Temps (Min/Max): -2 / 53 °C (Note-1,8)	
32	Relative Humidity (Min / Max): 3 / 32 %	
33	Unusual conditions: Dust And Sand Storm	
34	Electricity:	
35	Voltage: 400 V AC +/- 5%	
36	Phase: 3	
37	Hertz: 50 Hz +/- 1%	
38	Instrument air:	
39	Max Min	
40		Max Allow work Press @: STA Remark-1
41	MATERIAL (Note 10)	Hydrotest Press: STA
42	Case: SS 316L	Casing Mounting: STA
43	Impeller: SS 316L	
44	Wearing: STA	
45	Shaft: STA	
46	Sleeve: STA	
47	Base Plate: STA	
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41	MATERIAL (Note 10)	CONSTRUCTION
42	Case: SS 316L	
43	Impeller: SS 316L	
44	Wearing: STA	
45	Shaft: STA	
46	Sleeve: STA	
47	Base Plate: STA	
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49	INSPECTION AND TESTING	Weight Data: STA
50	Wit Non Wit Observe	Bearing Type: STA
51	Hydrostatic <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	Bearing No: STA
52	Performance Test <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	Seal Type /Model: STA
53		Seal Mfg: STA
54	<input checked="" type="radio"/> Shop Inspection (Witnessed)	Pump: STA
55	<input checked="" type="radio"/> Material Certification	Motor: STA
56	<input type="radio"/> Dismantle and Inspection After Test	Baseplate: STA
57	<input type="radio"/> Magnetic Particle	Total: STA
58	<input checked="" type="radio"/> Dye Penetrant	
59	<input type="radio"/> Radiographic	
60	<input type="radio"/> Ultrasonic	
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62	REMARKS:	Applicable Standard and Code
63	1. Design Conditions: Design pressure will be confirmed based on pump shut off pressure, Design Temperature = -2°C / 85°C.	<input type="radio"/> API /ASME
64		<input checked="" type="radio"/> Manufacturer Standard
65		<input type="radio"/> Others
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