



Mixer Data Sheet

Customer Name:	Industria Infinto S.A. / Vennessa Ventures	Order No:	U08I003
Customer Location:	Costa Rica	P.O. No.:	INT0001
Customer Equip. No:	TBA	Issue Date:	June 26, 2008
Equipment Desc.:	Cyanide Destruction Agitator	Revision:	0
Project Name:	Mina Crucitas		

Unit:	102GTH-150-20	Qty:	1	Serial No:	U08I003-03A
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Process:	Type	Cyanide Destruction Agitator		
	Temperature	30 deg.C	Dry Solids SG	2.70
	Pressure	Atmospheric	Liquid SG	1.00
	Weight %	27% w/w	Max. Particle Size	D99 = 250 D80 = 75
	Slurry S.G.	1.205	93% Pure O2:	96-150 Nm3/hr down the Shaft, 45psig Design Pressure with 1" Rotary Union
	Viscosity	414 cP @ 5/s, pH=10.6 236 cP @ 5/s, pH=8.5		

Vessel:	Ø 12.5m X 12.5 m SS, Open Top, Flat Bottom, 4 baffles @ 90deg 1040mm wide X Full length. Continuous flow with Upcomer Overflow
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Drive:	Motor:	Supplied and Mounted by MixPro (MixPro Choice) 110kW (150 HP) 1750 Rpm TEFC NEMA 445T Frame 1.15 SF Under 1000mASL 460V/3p/60Hz
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Gear Drive:	Manufacturer	Hansen
	Model	QVPH3-UDL
	Ratio	79.839:1
	Service Fct.	1.76 Mechanical / 1.41 Thermal
	Final Speed	18.7 Rpm
Belt Drive:	Belts:	5VX1000 (6)
	Driver:	11.3"
	Driven:	13.2"
	C-C:	30.7"
	Service Fct.:	1.42

Seal:	No Shaft Seal Is Used
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Mount:	Top Entry	Location:	See Dwg. L08I003-03
		Method:	Mounting Base (See Dwg. U08I003-03)

Shaft Reducer Output:	Diameter:	Ø 260 mm
	Length:	368 mm from Mounting base to Coupling CL
	Material:	42CrMoS4 (AISI 4150)
	Coupling:	Shrink-Fit to Rigid Welded Coupling on Pipe

Shaft 1:	Diameter:	Ø O.D. 356 mm, Ø I.D. 317 mm (14" Sch.80 Pipe)
	Length:	3399mm from Mounting base to Coupling CL
	Material:	C/S with Coal Tar Epoxy Coating

Shaft 2:	Diameter:	Ø O.D. 356 mm, Ø I.D. 317 mm (14" Sch.80 Pipe)
	Length:	6054 mm from Coupling CL to Impeller CL
	Material:	C/S with Coal Tar Epoxy Coating



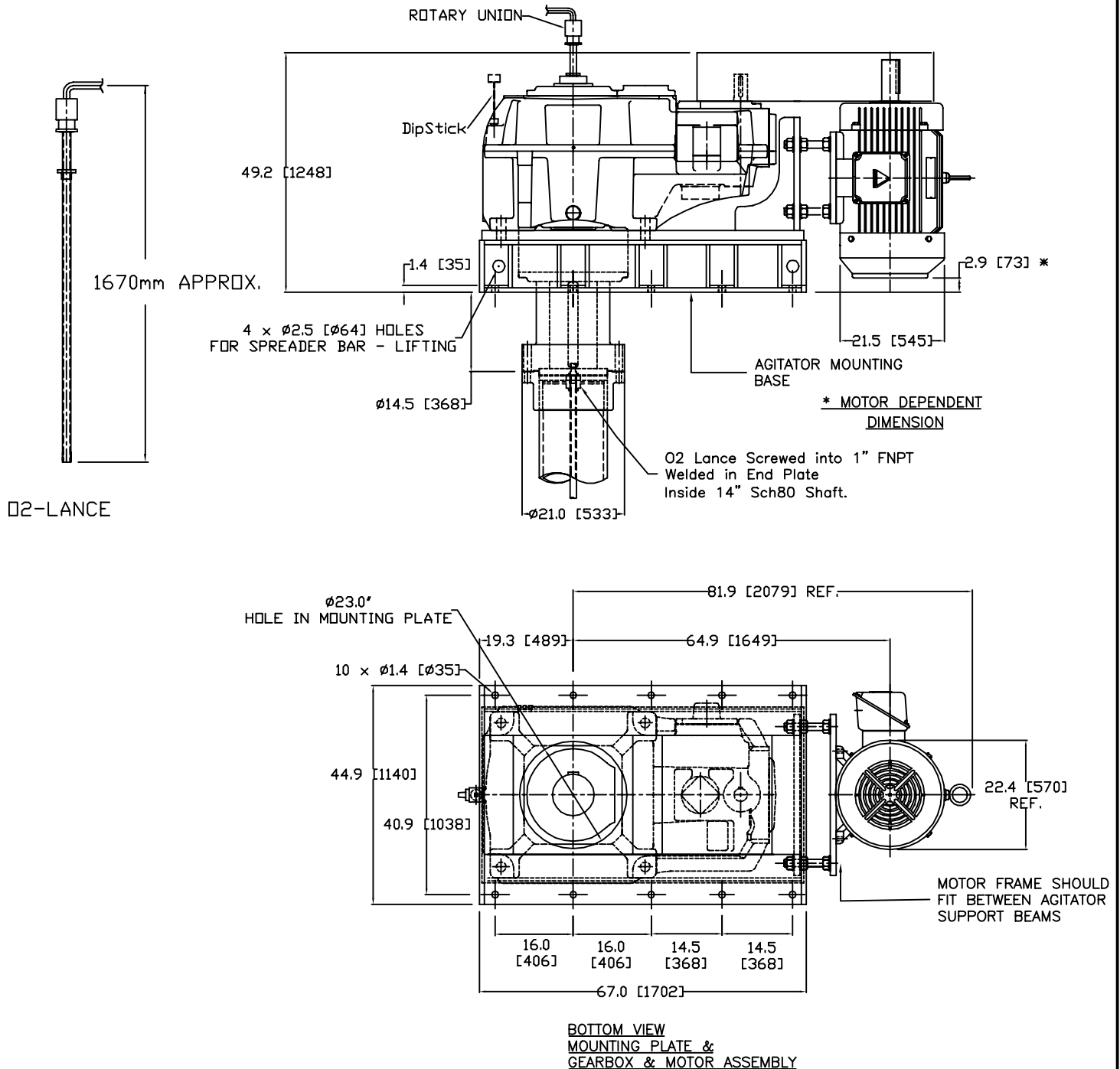
Mixer Data Sheet

Upper Impeller:	Style:	MP1300SP (See Dwg. T08I003-03)
	Diameter:	Ø 4902 mm
	Blades:	3 Bolt-On
	Material:	C/S with Natural Rubber 6mm & double thk. on edges
	Attach:	Hub Welded to Pipe Shaft
	Location:	4751 mm from mounting face to Impeller CL

Lower Impeller:	Style:	MP1300SP (See Dwg. T08I003-03)
	Diameter:	Ø 4902 mm
	Blades:	3 Bolt-On
	Material:	C/S with Natural Rubber 6mm & double thk. on edges
	Attach:	Hub Welded to Pipe Shaft
	Location:	9453 mm from mounting face to Impeller CL

Options:	O₂ Added Down the shaft thru Rotary Union, Lance pipe, 316LSS piping & Replaceable Sparger supplied by MixPro
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DRAWN TO SCALE



NOTE:

1. Dimensions are for reference only and subject to change without notice unless certified.
2. Standard mounting-base shown.
Other mounting base sizes available upon request.
3. Agitator support base must be designed for agitator weight, torque & bending loads.

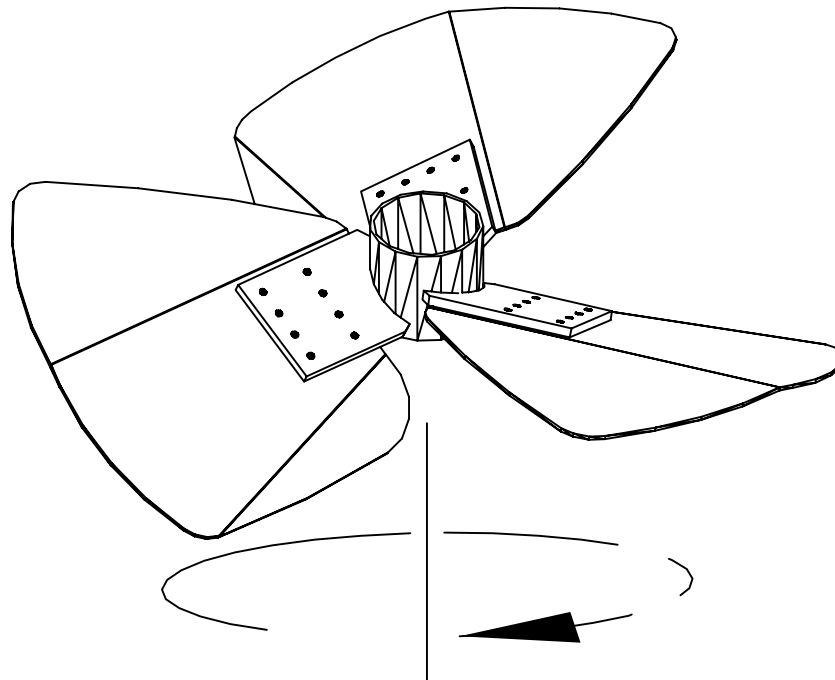
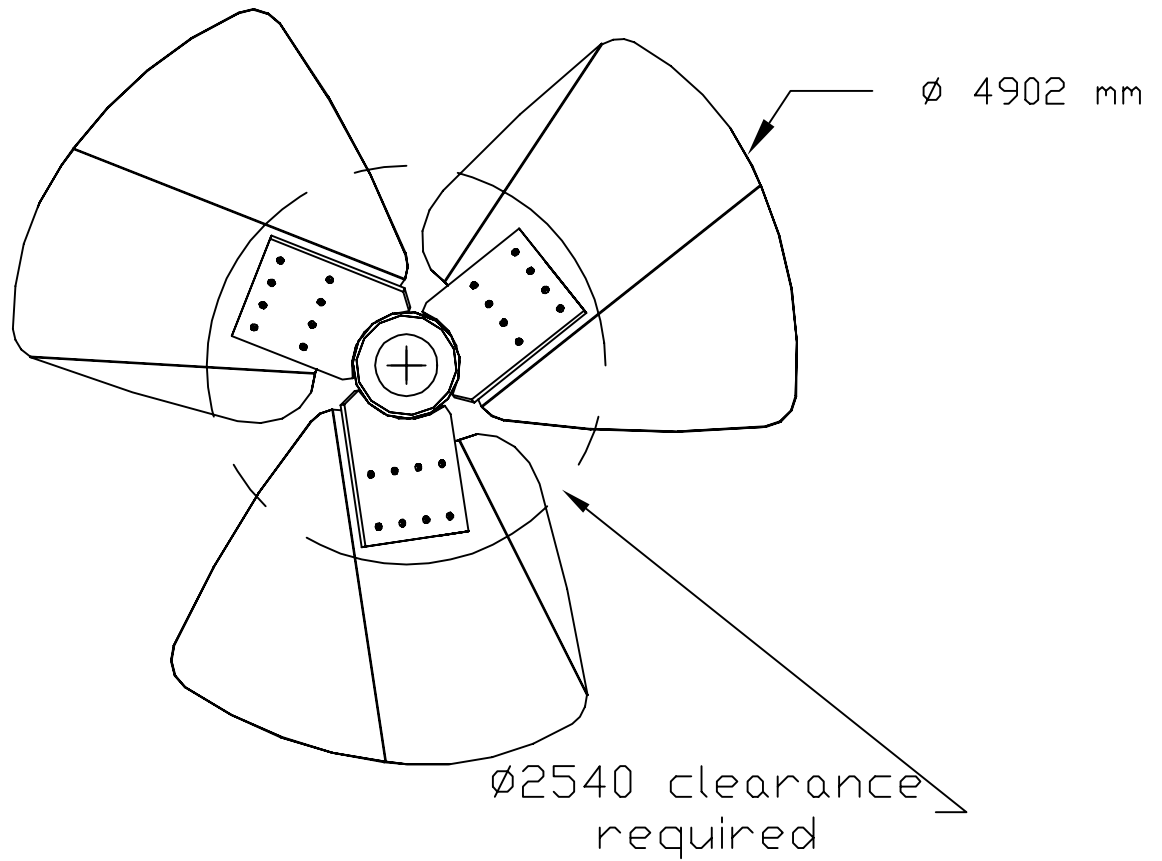
Equip. No.: TBA



102GTH Unit Dimensional Drawing
Industria Infinto S.A./ Vannessa Ventures, Costa Rica
Cyanide Destruction Agitator
P.O.# INT0001; S/N: U081003-03A

DIMENSIONS IN inch (mm)
DATE 26-June-2008 REV. 0

DWG. NO.
U081003-03



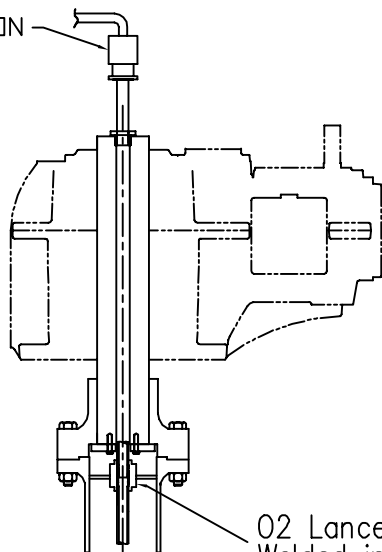
EQUIP. NO:

NOTE:

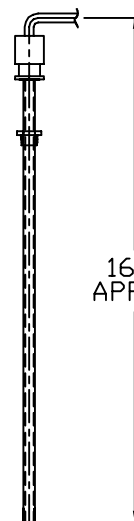
1. Identical Impeller to be used at Two (2) locations
2. Impeller O.D. includes 6mm & double thick rubber covering on the blade edges

	Ø 4902 mm MP1300SP Impeller Schematic Industria Infinto S.A./ Vennessa Ventures, Costa Rica Cyanide Destruction Agitator P.O.# INT0001; S/N: U081003-03A		
	DIMENSIONS IN INCHES		DWG. NO.
	DATE May 22, 2008	REV. 0	T081003-03

ROTARY UNION

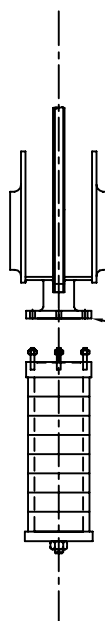
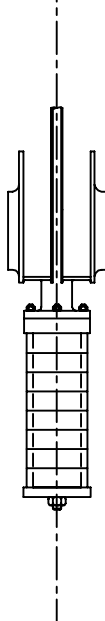


O2 Lance Screwed into 1" FNPT
Welded in End Plate
Inside 14"Sch80 Shaft.

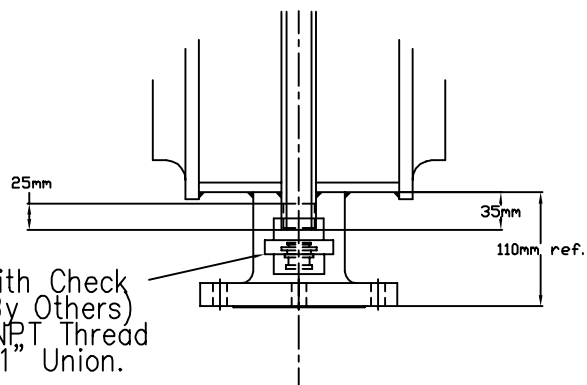


1670 mm
APPROX.

O2-LANCE



3" 150# ANSI Drilled 316ss RF Flange
Welded at End of Shaft for Sparger
Attachment and Strength.



Union with Check
Valve (By Others)
25mm NPT Thread
to Fit $\varnothing 1$ " Union.

Qty:1 CYANIDE DESTRUCTION AGITATOR



GAS-DOWN-SHAFT SCHEMATIC DRAWING
Industria Infinto S.A./ Vannessa Ventures, Costa Rica
Oxygen Down Shaft Details
P.O.# INT0001; S/N: U08I003-03A

DIMENSIONS IN MILLIMETERS	
DATE	REV.
26-June-2008	0

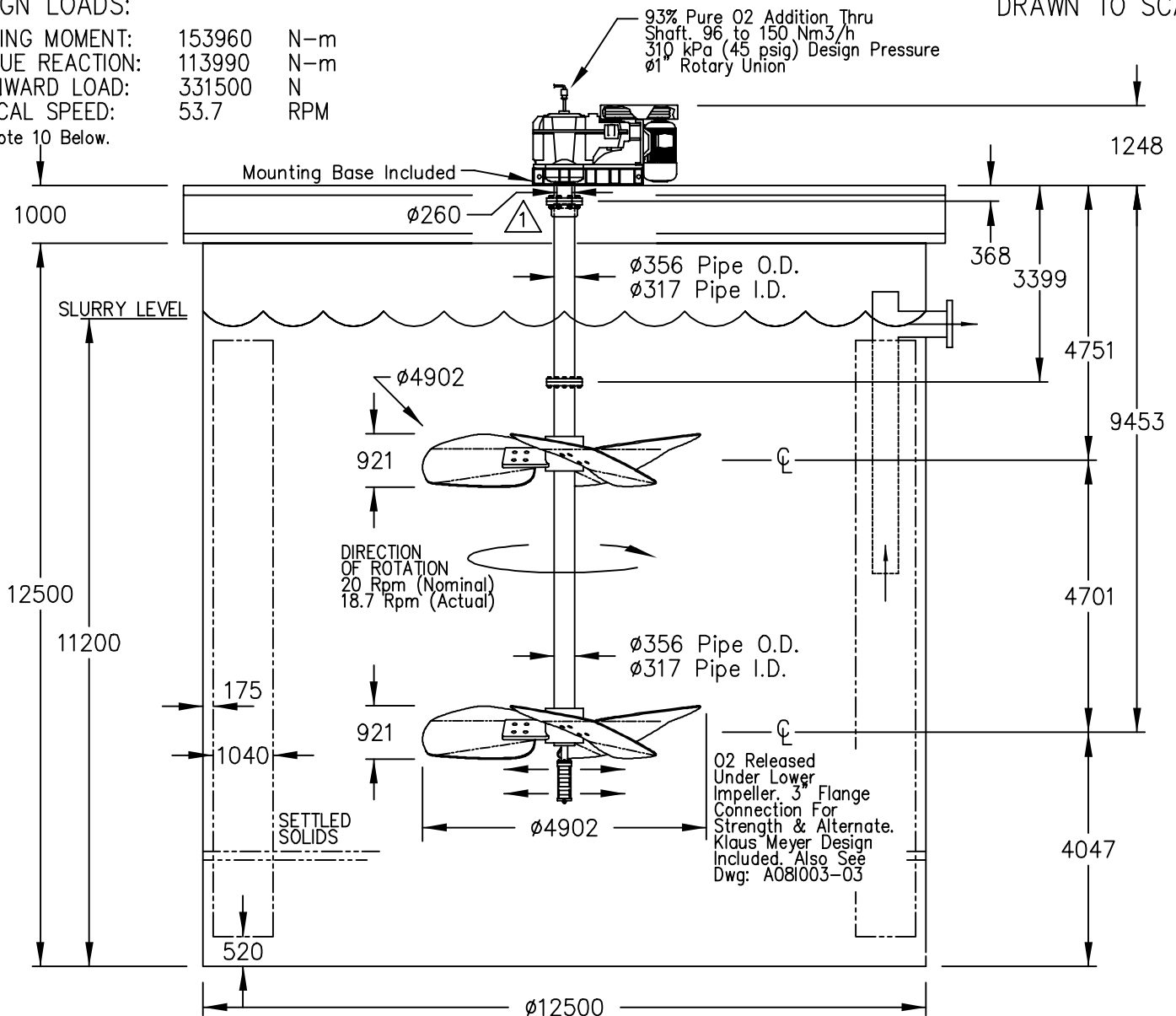
DWG. NO.
A08i003-03

DESIGN LOADS:

BENDING MOMENT: 153960 N-m
 TORQUE REACTION: 113990 N-m
 DOWNWARD LOAD: 331500 N
 CRITICAL SPEED: 53.7 RPM

See Note 10 Below.

DRAWN TO SCALE



NOTE:

- MixPro Agitator Model Number: 102GTH-150-20 w V-Belt on HSS of Hansen P4
- Motor: 110 kW (150 HP) at 1750 Rpm, TEFC NEMA Frame 445T, Suitable for 460V/3p/60Hz Power, Under 1000 m Elevation, & 40°C Ambient. Premium Efficiency.
- Belt Drive: 11.3" to 13.2" Pulleys & 5VX1000(6) Belts or Equal. >1.3 RMA SF (1.48 SF) (30.7"C-C)
- Gear Reducer: Hansen P4 Model QVPH3-UDL, All Helical Gearing, Heavy-Duty Output Shaft & Drop Bearing having >100000 L10 hrs Bearing Life, Ratio 79.839:1, Mech. Gear S.F.=1.79, Oil Lubricated & Drywell. (Modification needed for Gas added down shaft.)
- Seal: No Shaft Seal is Used
- Shaft: Two (2) Piece Extension Shaft 8890 mm Long, made from 14"Sch80 Seamless C/S pipe. Coal Tar Epoxy Paint on Shaft. Impeller Hubs Welded to the Pipe Shaft.
- Impellers: (2) Ø4902 mm Diameter High Efficiency Wide-Blade Hydrofoil, Type MP1300SP with Three (3) Bolt-On Blades Each. Impeller Blades Rubber Lined for Abrasion.
- Process: 1.205 SpGr CIP Tailings Slurry (Saprolite Ore) having 27%w/w Solids, 1.00 Liquid SpGr, 2.70 Solids SpGr, Max. Particle Size 250 microns. 236 to 414 cP Viscosity @5/s. CyPlus Process w Na₂S₂O₅ Solution added into feed slurry & H₂O₂ added to surface near center. Alternately Operated as SO₂/Air Process w 129 Nm³/hr of 93% pure O₂ from PSA Plant added under lower impeller. Designed for 94 kgC₂/h oxygen transfer. 93% Pure Oxygen added down the shaft. Constant Level w Upcomer Overflow. Cu++ & Lime may be added.
- Wetted Parts: Carbon Steel. Natural Rubber Covered Blades. Coal Tar Epoxy on Shaft.
- The agitator beam support must be sufficiently rigid to prevent the agitator from vertically deflecting 6.5 mm and 1/3" deflection in any direction (ie twist). The loads shown include a suitable safety factor.

Equip. No.:



LOCATION DRAWING		
Industria Infinto S.A./ Vennessa Ventures, Costa Rica		
Cyanide Destruction Agitator		
P.O.# INT0001; S/N: U08I003-03A		
DIMENSIONS IN MILLIMETERS		DWG. NO.
DATE	REV.	L08I003-03
June 26, 2008	0	