

The Expert in Hydrodynamics

Dongguan Vinsome Co., Ltd.

INTRODUCTION

DONGGUAN VINSOME is a professional provider of overall technical solutions in the fields of fluid machinery and fluid engineering, industrial equipment automation, and frequency converters.

- The company has multi-professional technical talents, including a total of 8 professional technical talents in fluid engineering, electrical engineering, and electronic engineering.
- The company has long-term professional and technical cooperation with **Jiangsu University, Chinese Academy of Sciences, and Guangdong University of Technology.**
- DONGGUAN VINSOME CO., LTD. setup in 2007 (EPP/Hydroblue), is known as a fast-growing provider for pumps, motors, sealing systems, couplings, gearboxes and engineering solutions. We are dedicated to provide customers with precise and reliable service by combining the manufacturing capability of mainland China with our supply chain management services through our extensive network of Chinese factories.
- VINSOME's vision is to provide our customers with the highest level of satisfaction imaginable by offering innovative solutions, nurturing long-term relationships, anticipating future needs and being highly responsive to their emergencies at the most cost effective basis.
- Over the years, VINSOME has established itself in Singapore, Malaysia, Indonesia, Thailand, Russia, Belarus, Ukraine and China market, focusing more and more on oil and gas industry, mining, utilities and government sectors.

Technical Advantages

- Cooperate with the National Research Center of Pumps of Jiangsu University in the fields of pump hydraulic model design, hydraulic characteristics research, numerical simulation of flow in the pump, and intelligent energy-saving technology and equipment research;
- Cooperate with the Chinese Academy of Sciences in the field of special coating technology for pump wet parts to meet users' exclusive requirements for corrosion resistance and wear resistance;
- Cooperate with Guangdong University of Technology in the fields of industrial control and drive such as industrial intelligent equipment and frequency converters.

Service

1

Calculation of pipeline loss

Professional Computing Software

管道损失计算

单泵参数
流量: 100 m³/h
净扬程 (进出水水位差): 30 m
单泵运行
多泵并联

第1段管道流量
水泵台数确定流量
手动输入确定流量
水泵台数: 1
流量: 100 m³/h

第1段管道损失计算
沿程损失计算
管道长度: 300 m
水温: 20.0 °C
 标准管径内径: 150 mm
管道内径大径: 150 mm
管道内径小径: mm
 根据粗糙度计算阻力系数
 选择材料或给定绝对粗糙度
管道材料: 新钢管
绝对粗糙度: 0.12 mm
 直接给定阻力系数

管内流速: 1.5719 m/s
速度水头: 0.1259 m
运动粘度: 1.0067 × 10⁻⁶ m²/s
当量直径: 150 mm
雷诺数: 234212
管壁当量粗糙度 Δ/d: 0.0008
沿程阻力系数 λ: 0.02
计算 本段沿程损失 = 5.04 m

局部损失计算

项目	局部阻力系数	数目	项目	局部阻力系数	数目
管子进口 无扩大	0.5	1	管子进口 有喇叭口	0.15	1
出口	1	1	渐缩弯头	0.1	1
渐缩弯头	0.25	1	90度弯头	0.25	1
45度弯头	0.15	1	直通三通	0.1	1
曲线三通	2	1	分流三通	1.5	1
Y型管	1	1	无滤网底 阀	0.5	1
有滤网底 阀	1.8	1	截止阀	1	1
闸阀	0.1	1	蝶阀	2	1
拍门	0.5	1	其他 情况 请点击左图	0	1

总损失系数 = 3.75
计算 本段局部损失 = 0.4723 m

水泵总扬程 = 净扬程 + 管路损失 + 进出水压差 (此处忽略不计) = 35.5122 m
计算第2段管道 查看结果并退出 返回结果

Technical Advantages

Service 2

Reliable and precise pump model selection

Technology selection software

VINSOME Customer: Reference: Pump Performance Datasheet VINSOME Selector System 21.0

Item number	: 960	Size	: DS50-215B
Service	:	Stages	: 7
Quantity	: 1	Suction branch	: 0.00 mm
Quote number	: 348880	Discharge branch	: 0.00 mm
Date last saved	: 2021-02-24 19:33	Based on curve number	: HB50-215B

Operating Conditions		Liquid	
Flow, rated	: 34.00 m ³ /h	Liquid type	: Fluid
Differential head / pressure, rated (requested)	: 378.0 m	Additional liquid description	: Amine
Differential head / pressure, rated (actual)	: 380.4 m	Solids diameter, max	: 0.00 mm
Suction pressure, rated / max	: 0.00 / 0.00 bar.g	Solids concentration, by volume	: 0.00 %
NPSH available, rated	: Ample	Temperature, max	: 20.00 deg C
Site Supply Frequency	: 50 Hz	Fluid density, rated / max	: 1,020.0 / 1,020.0 kg/m ³

Performance		Material	
Speed criteria	: Synchronous	Material selected	: Standard
Speed, rated	: 2950 rpm	Pressure Data	
Impeller diameter, rated	: 212 mm	Maximum working pressure	: 44.95 bar.g
Impeller diameter, maximum	: 215 mm	Maximum allowable working pressure	: N/A
Impeller diameter, minimum	: 195 mm	Maximum allowable suction pressure	: N/A
Efficiency	: 50.03 %	Hydrostatic test pressure	: N/A
NPSH required / margin required	: 1.91 / 0.00 m	Driver & Power Data (@Max density)	
Ns (imp. eye flow) / Nss (imp. eye flow)	: 858 / 9,627 US Units	Driver sizing specification	: Rated power
MCSF	: 5.00 m ³ /h	Margin over specification	: 0.00 %
Head, maximum, rated diameter	: 449.3 m	Service factor	: 1.00
Head rise to shutoff	: 18.87 m	Power, hydraulic	: 35.71 kW
Flow, best eff. point	: 40.90 m ³ /h	Power, rated	: 71.38 kW
Flow ratio, rated / BEP	: 83.12 %	Power, maximum, rated diameter	: 83.13 kW
Diameter ratio (rated / max)	: 98.60 %	Minimum recommended motor rating	: 75.00 kW / 101 hp
Head ratio (rated dia / max dia)	: 95.30 %		
Cq/Ch/Ce/Cn [ANSI/ISO 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00		
Selection status	: Acceptable		

Head - m

NPSHr - m

Power - kW

Flow - m³/h

Technical Advantages

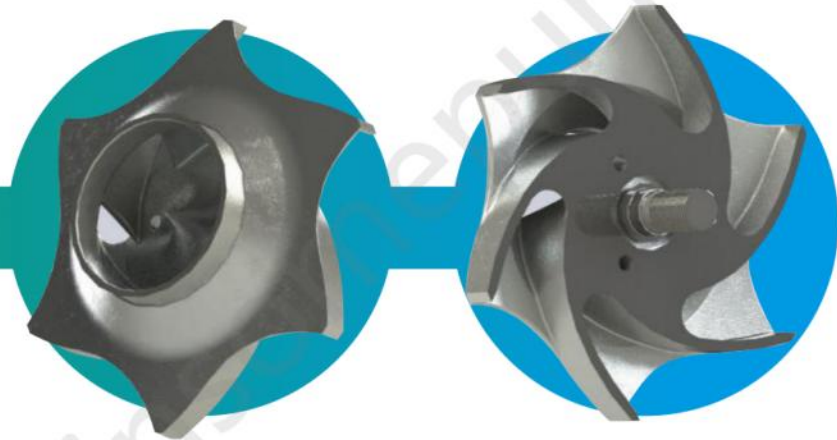
Service

3

Professional reverse-engineering for critical spare parts



Physical diagram of impeller

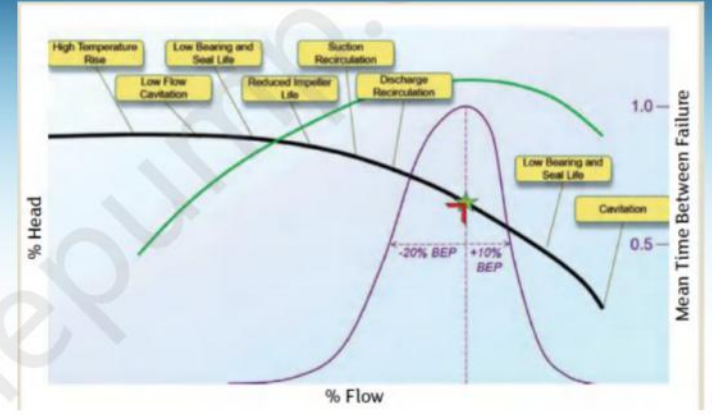


Technical Advantages

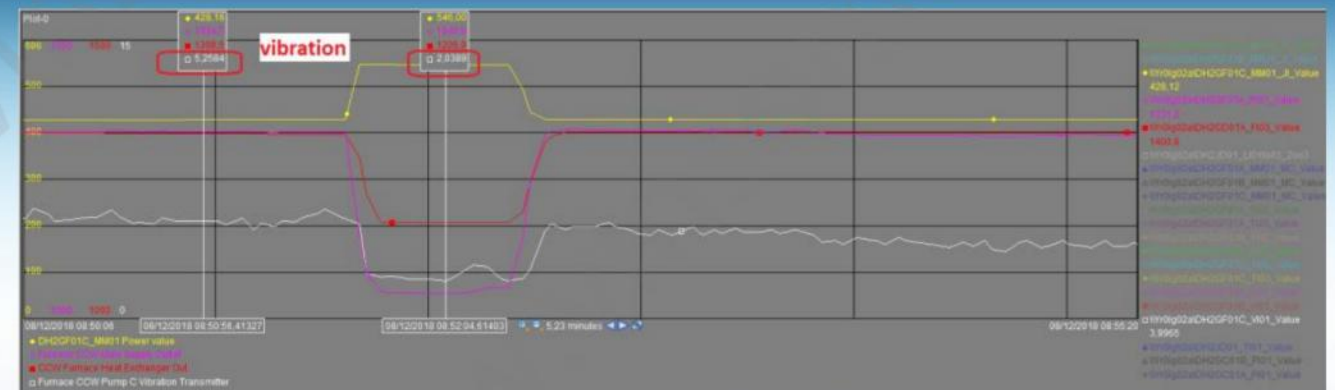
Service 4

Analysis for pump service data and results

Pump operating range



Pump vibration analysis



Technical Advantages

Service

5

Pump process supervision and control



PN.1 Casting Model



PN.2 Manufacturing Parts



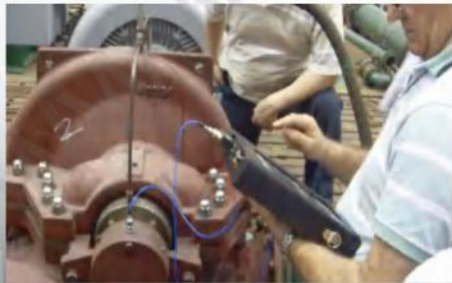
PN.3 Impeller Static & Dynamic Balance Testing



PN.4 Hydrostatic Testing



PN.5 Double Suction Split Case Centrifugal Pump Testing



PN.6 Pump Vibration Testing



PN.7 Film Thickness Testing



PN.8 Circulation Water Pump Testing



PN.9 Condensation Pump Testing



PN.10 Open Impeller Pulp Pump Testing

Technical Advantages

Professional Inspection Test Plan (ITP)

INSPECTION AND TEST PLAN				Document No.			
				Rev	Date	Prepared by	Approved by
Item	Tests	Applicable Standard	Acceptance Criteria	Intervention			Remarks
				HydroBlue	MARLY	Owner	
1	Material (Pump casing / pump cover / Impeller / Shaft) of certificate	EN 10204-3.1B	EN 10204-3.1B Certificate	R			
2	Rotor (or Impeller) Static & Dynamic Balancing Testing	ISO 1940-1	According to guidance for balance gravity grade for rotors G2.5	W			
3	Hydrostatic Testing	ISO5199	Hydrostatic pressure shall be 1.5 times the maximum allowable working pressure. $P_t = 17.5\text{bar}(12\text{ bar} + 5.5\text{bar}) \times 1.5 = 27\text{bar}$	W			
4	Hydraulic Performance Testing	ISO9906	Rotodynamic pumps-Hydraulic performance acceptance tests Grade 2	W			
5	NPSHR Performance Testing	ISO9906	Pump data sheet and spec, If the difference between NPSHR and NPSHA is greater than 1 meters, do not do NPSH test.	W			
6	Mechanical Run Testing	ISO9906	Temperature readings shall be taken every 10 minutes for the first hour and every 15 minutes until stabilization.	M			
7	Pump Vibration Testing	ISO 2372	Ensure measurements are according to vibration amplitude acceptance guidelines of ISO 2372.	W			
8	Sound-level measurement area	ISO 3746	Factory test values are only for reference	W			
9	Final Inspection including Visual Dimensional and Painting	As-bulit drawing	All the critical dimensions are according to approved General Arrangement Drawing (As-bulit drawing)	R			
10	Mannufacturer Data Book	FAT	Factory routine	R			
11	Packing Inspection		According to our export packing procedure	M			
Legend of Inspection Points: H: Hold point W: Witness inspection/test shall be performed R: Release of certificates M: moritoring			Notes: witness test will be done on 1 unit per each item.				

Technical Advantages

Professional Inspection Test Plan (NDT)

PT: Liquid Penetrant Inspection / Impeller



PT: Liquid Penetrant Inspection / Welded Baseplate



Materials inspection standards			
Type of inspection	Methods	Acceptance criteria	
		For fabrications	For castings
Radiography / RT	ASME BPVC, Section V, Articles 2 and 22	ASME BPVC, Section VIII, Division 1, UW-51 (for 100 % radiography) and UW-52 (for spot radiography)	ASME BPVC, Section VIII, Division 1, Appendix 7
Ultrasonic inspection / UT	ASME BPVC, Section V, Articles 5 and 23	ASME BPVC, Section VIII, Division 1, Appendix 12	ASME BPVC, Section VIII, Division 1, Appendix 7
Liquid-penetrant inspection / PT	ASME BPVC, Section V, Articles 6 and 24	ASME BPVC, Section VIII, Division 1, Appendix 8	ASME BPVC, Section VIII, Division 1, Appendix 7
Magnetic-particle inspection / MT	ASME BPVC, Section V, Articles 7 and 25	ASME BPVC, Section VIII, Division 1, Appendix 6	ASME BPVC, Section VIII, Division 1, Appendix 7
Visual Inspection / VT (all surfaces)	ASME BPVC, Section V, Article 9	In accordance with the material specification and the manufacturer's documented procedures	MSS SP-55

Technical Advantages

Professional Inspection Test Plan (Reports)

Material of certificate

Quality Certification
No. G. E. 004
(Acc. To EN10204-2004 3.1)

Rev: 0

Supplier	P.O. No.	WHS#	Issuing	Date	Apprval	Conclusion
Dain Process Indus Co., Ltd	AH274		WJL	2022.07.26	L20	PASS

Line no.	Part name	Quantity	Drawing no.	Melting No.	Heat-treatment No.	Identification
1	1st Impeller	4	1-20000100140-2-2	01702	10122	
2	Diffuser	4	1-20000100140-2-2	01702	10122	
3	Impeller	16	1-20000100140-2-2	01702	10122	
4	Stage casing	12	1-20000100140-2-2	01702	10122	

Chemical Analysis

Material standard	GB 11332-09	ZG230-450	Melting No.	G1702							
Composition	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	T	Residual
Standard Value	≤0.30	≤0.95	≤0.30	≤0.032	≤0.035	≤0.30	≤0.40	≤0.10	≤0.40	≤0.01	≤1.00
Actual Data	0.23	0.45	0.41	0.022	0.022	0.13	0.42	0.009	0.006	0.002	0.100

Heat Treatment

HT No.	HT Method	Soaking Temperature	Soaking Time	Cooling Method
10122	Normalizing	900±10°C	30s	water

Please see the attached heat-treatment curve on the back.

Mechanical Property Analysis

Standard	GB 11332-09	ZG230-450	Specimen No.	G1702	
Item	Rolling Strength	Yield Strength	Elongation Rate	Reduction Area	Hardness
Standard Value	≥2300	≥230	≥22	≥32	
Actual Data	249	226	22.0	61	

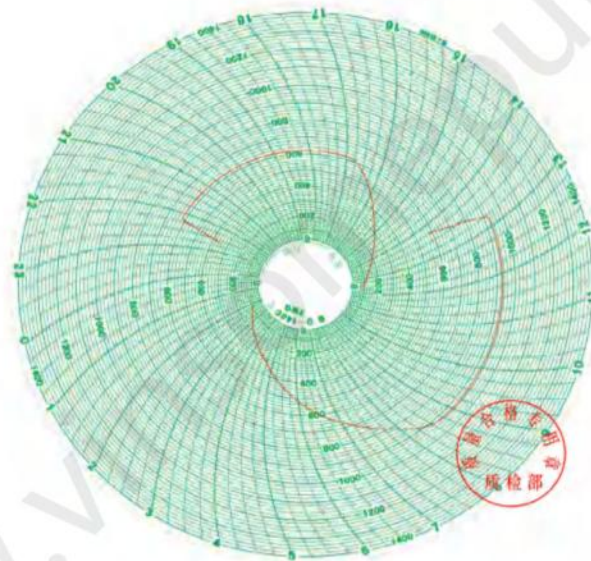
The following test requirements and data please see the attachment file.

Impact Test Heat surface overlay

Visual and Dimension Inspection

We hereby certify that visual and dimension inspection of the above materials are in compliance with requirements of specifications or drawings mentioned on P.O.

Material heat-treatment curves



Positive Material Identification / PMI



Technical Advantages

Professional Inspection Test Plan (Testing)

Rotor (or Impeller) Static & Dynamic Balancing Testing



Hydrostatic Testing



Technical Advantages

Professional Inspection Test Plan (Testing)

API610 BB3 Pump Hydraulic Performance Testing



Double-suction Split Casing Pump Hydraulic Performance Testing



End-suction Pump Hydraulic Performance Testing



Overseas Projects

1 Water Treatment

Water purification , Utter Water purification , Seawater Treatment , Concentration of Concentrated Salt-Zero Emission

2 Sewage Treatment

City sewage treatment , Industrial sludge , Industrial sewage, Electronics industry , Electroplating, printing and dyeing

3 API610 Petroleum Industry

Petroleum, Petrochemical and Natural Gas Industries (Refinery, Petrochemical, Oil & Gas etc.)

4 Thermal Power Plant

Cooling , Circulation , Boiler feed water , Condensate water

5 Pulp Industry

Palm oil , Sugar, Pulp & Paper plant

6 Air Conditioning & Fire Fighting Engineering

Air Conditioning , Fire Fighting

7 Chemical Industry

Coating , Ceramics , Food processing , Pharma

8 Pump Station

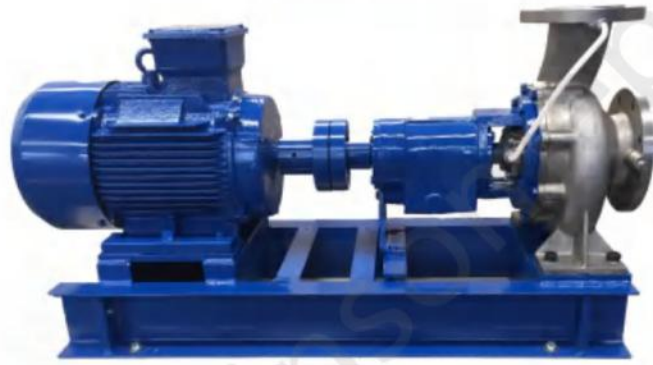
Hydraulic engineering , Pump station

9 Replacement / Repair Spare Parts

10 Digital Intelligent Control Water Pump

Overseas Projects

Water Treatment



SE



MD



ME



SEH



Overseas Projects

2 Sewage Treatment



Stainless steel Submersible pump



Rotor parts of Screw pump



NEMO Screw Pump

Overseas Projects

3 Petrol-industry



API BB4 pump operation site



API OH3 pump operation site



API BB3 pump assembly

Overseas Projects

4 Thermal Power Plant



CWP / Circulating Water Pump / Double-suction Split Casing pump



BFP / Boiler Feed Pump / Multi-stage high pressure pump



CEP / Condensate Extraction Pump

Overseas Projects

5 Pulp Industry



SEMI-OPEN Impeller of Pulp pump



Pulp pump operation site

Overseas Projects

6

Air Conditioning & Fire Fighting Engineering



Air-conditioning



Overseas Projects

Air Operated Diaphragm operation Site

7

Chemical Industry



Overseas Projects



8 Pump Station



Mix-flow pump Operation at site



VINSOME
www.vinsomepump.com

Overseas Projects

9 Replacement / Repair Spare Parts



Pump Type	Description
V-FLOWS	Mark 3 ANSI / Durco ISO / CPX / FRBH / ERPN / HPX / HDX / HED / WCC / DMX
V-SUL	APP / NPP / WPP / EPP / AUP / ZPP / CPT / OHHL / MC / MD / GSG / CD8 / BBTB / MSD / MCA / MCE / MCV
V-GOULD	3196 / 3175 / 3180 / 3185
V-AND	S / S3 / S8 / ACP
V-SANPIPER	BS02 / BS05 / BS10 / BS15 / BS20 / BS30
V-NEMO	BY / SY
V-SEEPEX	MD / BN
V-WARMAN	AH / AHR / HH / L / SP / SPR / G
V-FLYGT	N-series / H-series / C-series / F-series / M-series

Overseas Projects

10

Digital Intelligent Control Water Pumps



JWZBN intelligent self-priming water pump



SCPMN In-line intelligent booster water pump



SJETSNT intelligent stainless steel self-priming water pump



SWH intelligent whole house shielded booster water pump

Field Operation



Field Operation

PUMPS (BFP)

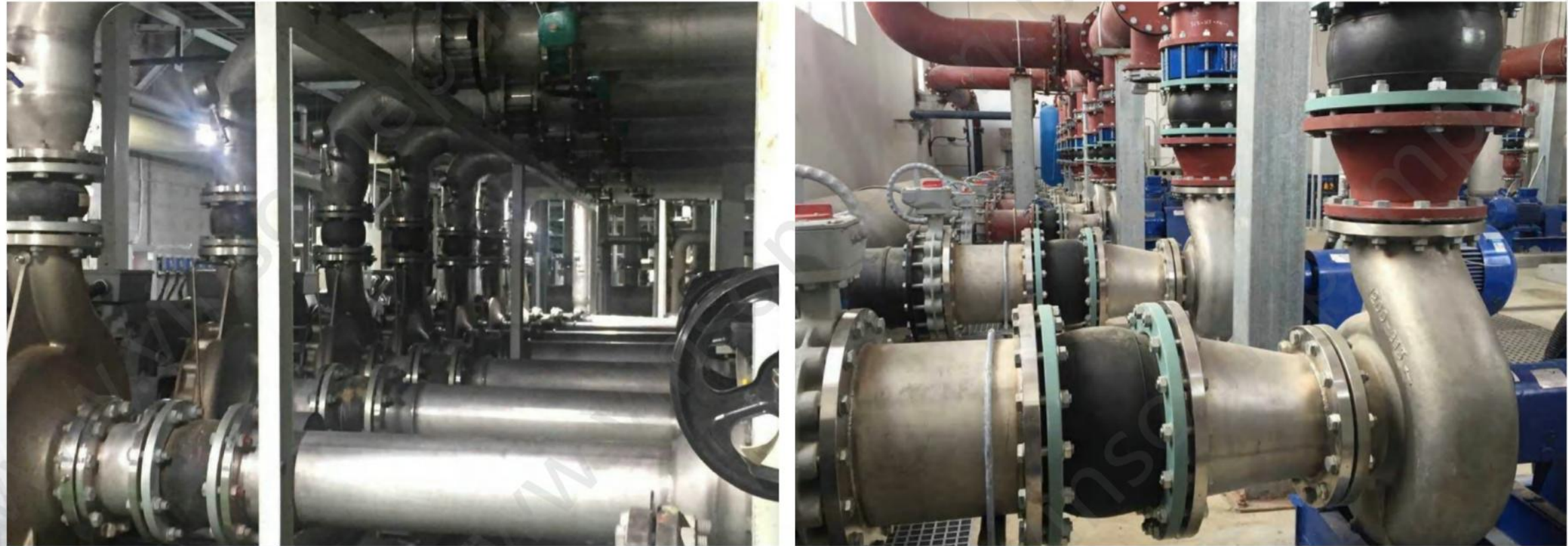
For Thermal Power Plant



Field Operation

SE PUMPS

For Water Treatment Plant System



Field Operation

CWP PUMP IMPELLER

FOR NUCLEAR
POWER PLANT

VINSOME provides with Mix-flow pumps up to **3.5m** diameter impellers for this sectors.



Field Operation



Submersible Pumps to Australia



Submersible Pumps to Australia

Field Operation



- Pumps to Sudan
- Water Treatment Project
- Quantity No. 200 sets



- Pumps to Ethiopia
- Water Treatment Project
- Quantity No. 100 sets

Field Operation

AE SERIES

Single Stage
End Suction
Centrifugal
Pumps



VINSOME
www.vinsomepump.com

Field Operation

SE SERIES

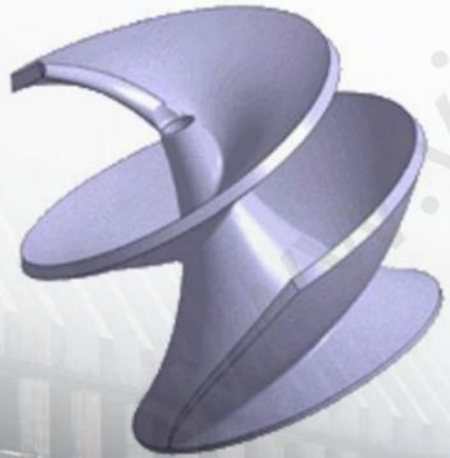
Single Stage
End Suction
Centrifugal
Pumps for
Zero discharge
sewage
treatment



Field Operation

OIL-COOLING SCREW CENTRIFUGAL PUMPS

For Sewage Treatment



Field Operation

Submersible Axial Flow Pumps



Field Operation

Submersible Sewage Pumps



Our Suppliers

Pump Parts Casting



Mechanical Seal

EagleBurgmann.



Motors



SIEMENS

**BROOK
CROMPTON**

marathon[®]
Motors



Bearings



MOTION & CONTROL™
NSK

FAG

Our Suppliers

Couplings



VIVA
Elastomeric
Couplings



Omega
Elastomeric
Couplings



Flexible
Disc XTSR
Couplings



创明
POWER TRANSMISSION PRODUCTS