



HDX centrifugal pumps

Single stage, double suction, radially split volute type centrifugal pumps

PCN=85392696 – 01/11 (E) Original instructions

Storage of spares

Spares should be stored in a clean dry area away from vibration. Inspection and re-treatment of metallic surfaces (if necessary) with preservative is recommended at 6 monthly intervals

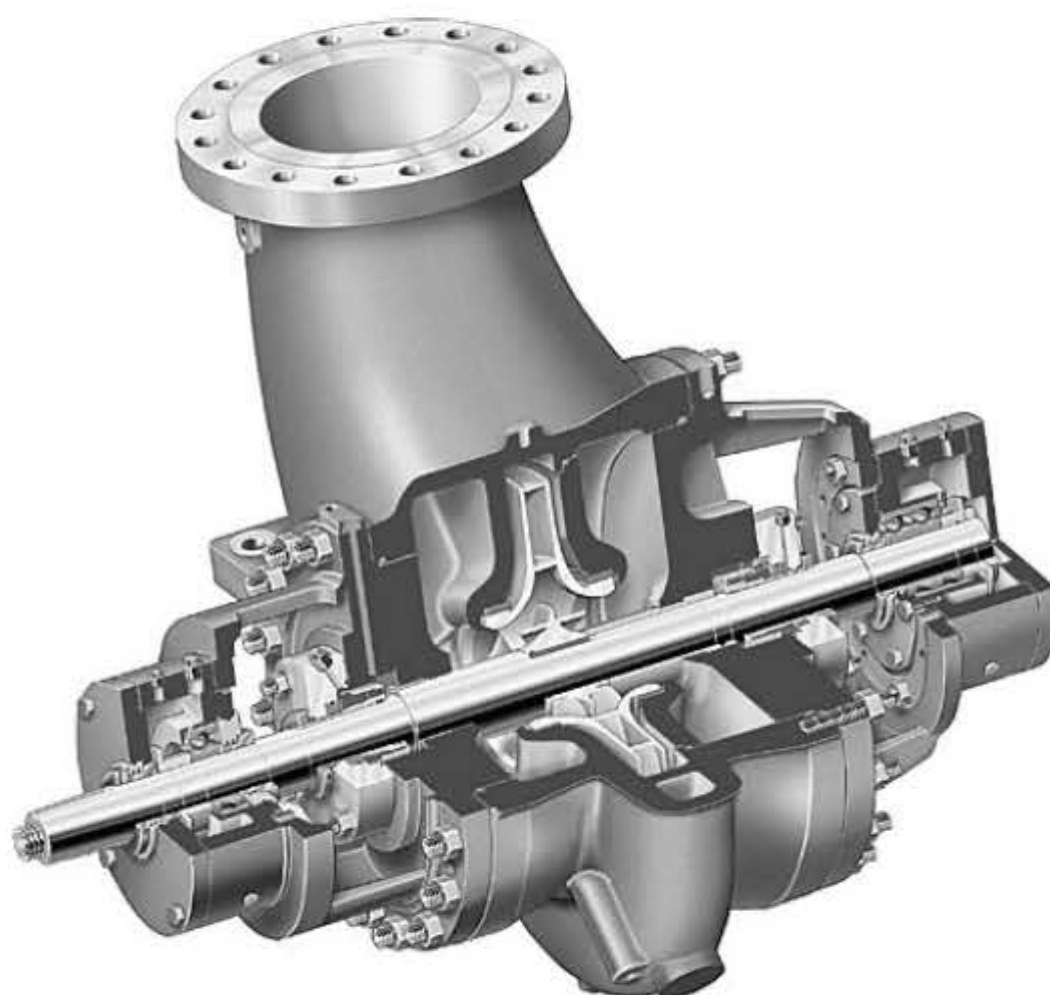
Recommended spares (according to API)

For start up purposes:

- 1 - set of bearings (line and thrust)
- 2 - sets of gaskets and o-ring
- 2 - wear rings set (2 rotating + 2 stationary)
- 1 - mechanical seals
- 1 - labyrinth set (drive and impeller end)

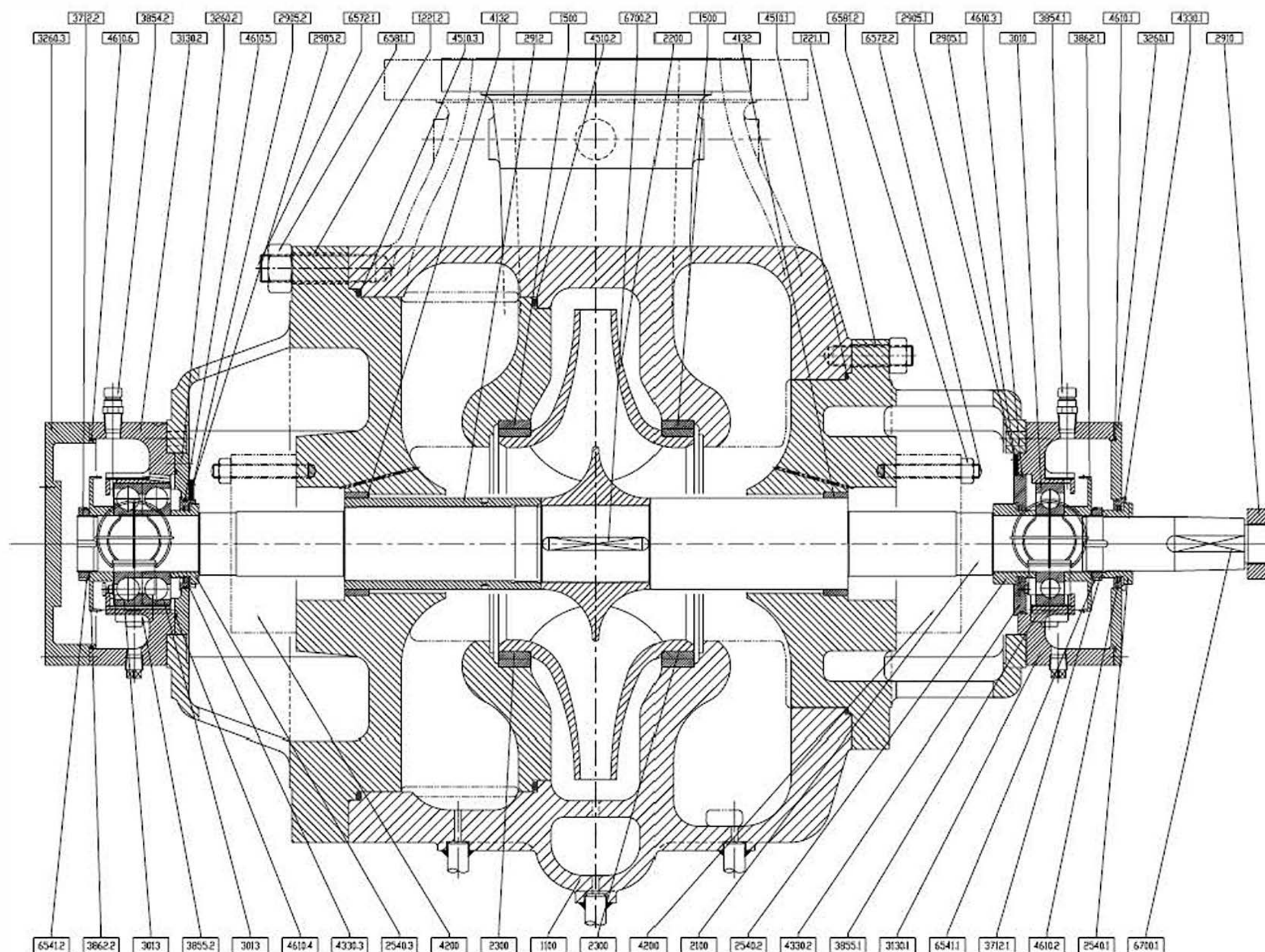
For normal maintenance:

- 1 - set of bearings (line and thrust)
- 2 - sets of gaskets and o-ring
- 2 - wear rings set (2 rotating + 2 stationary)
- 1 - mechanical seals
- 1 - labyrinth and deflector set (drive and impeller end)
- 1 - shaft
- 1 - impeller



8 PARTS LIST AND DRAWINGS

8.1 HDX Antifriction Bearing + Slinger Lubrication



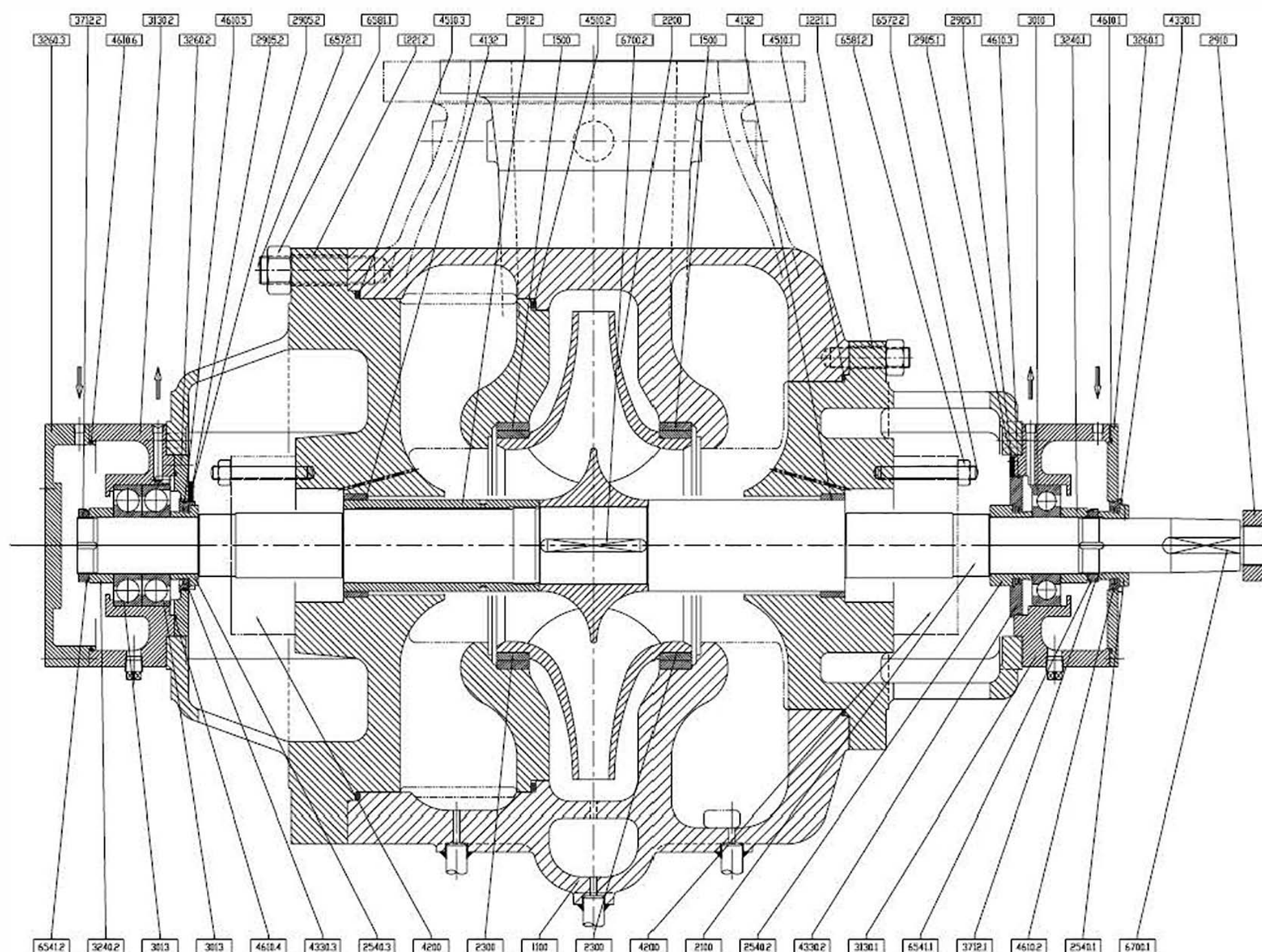
8.1.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket

Ref no	Description
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3712.2	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring

Ref no	Description
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
4610.4	"O" Ring
4610.5	"O" Ring
4610.6	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.2 HDX Antifriction Bearing + Oil Mist Lubrication



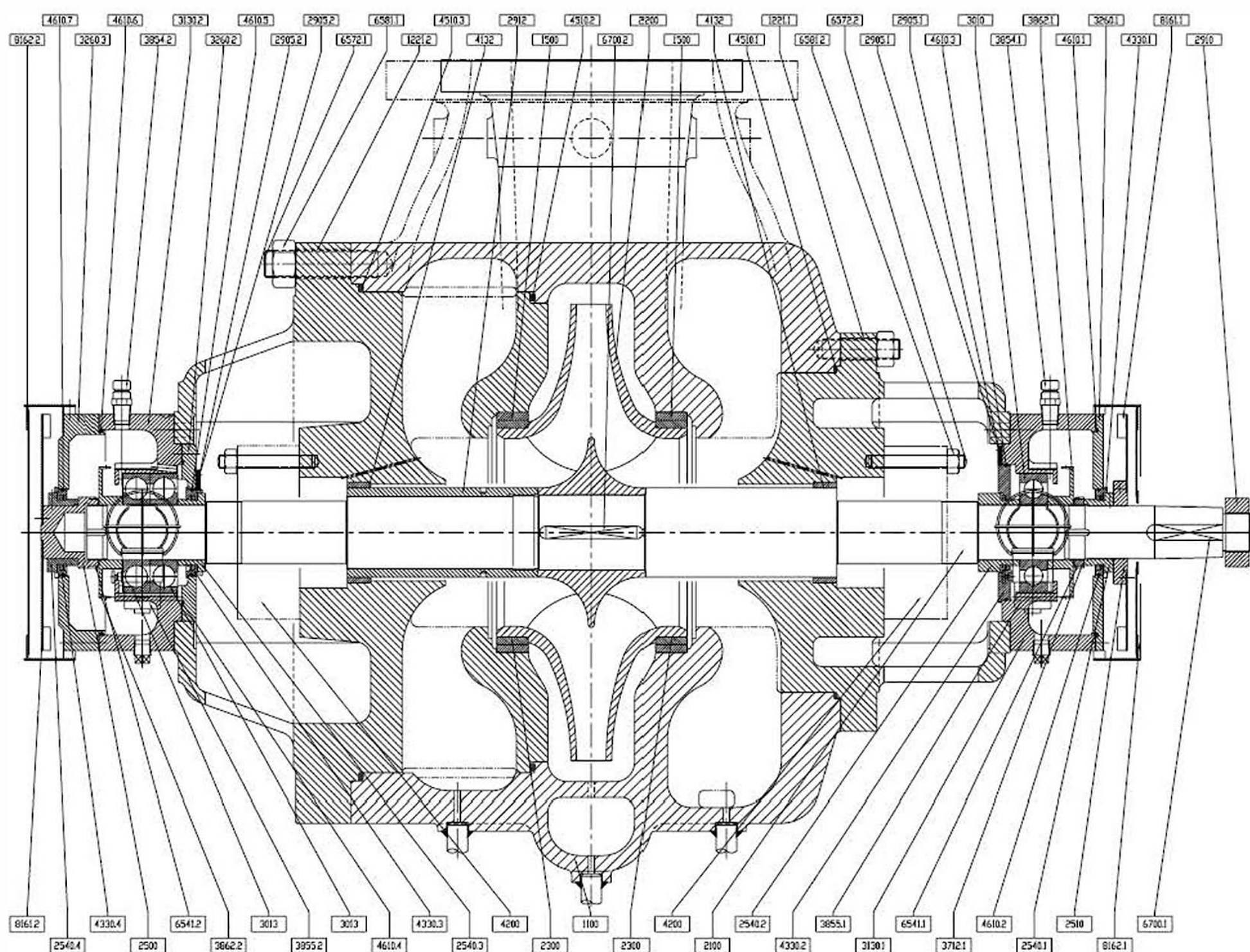
8.2.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket

Ref no	Description
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3712.2	Bearing Nut
4132	Stuffing Box Bushing
4200	Mechanical Seal
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring

Ref no	Description
4610.4	"O" Ring
4610.5	"O" Ring
4610.6	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.3 HDX Antifriction Bearing + Slinger Lubrication + Fan Cooling



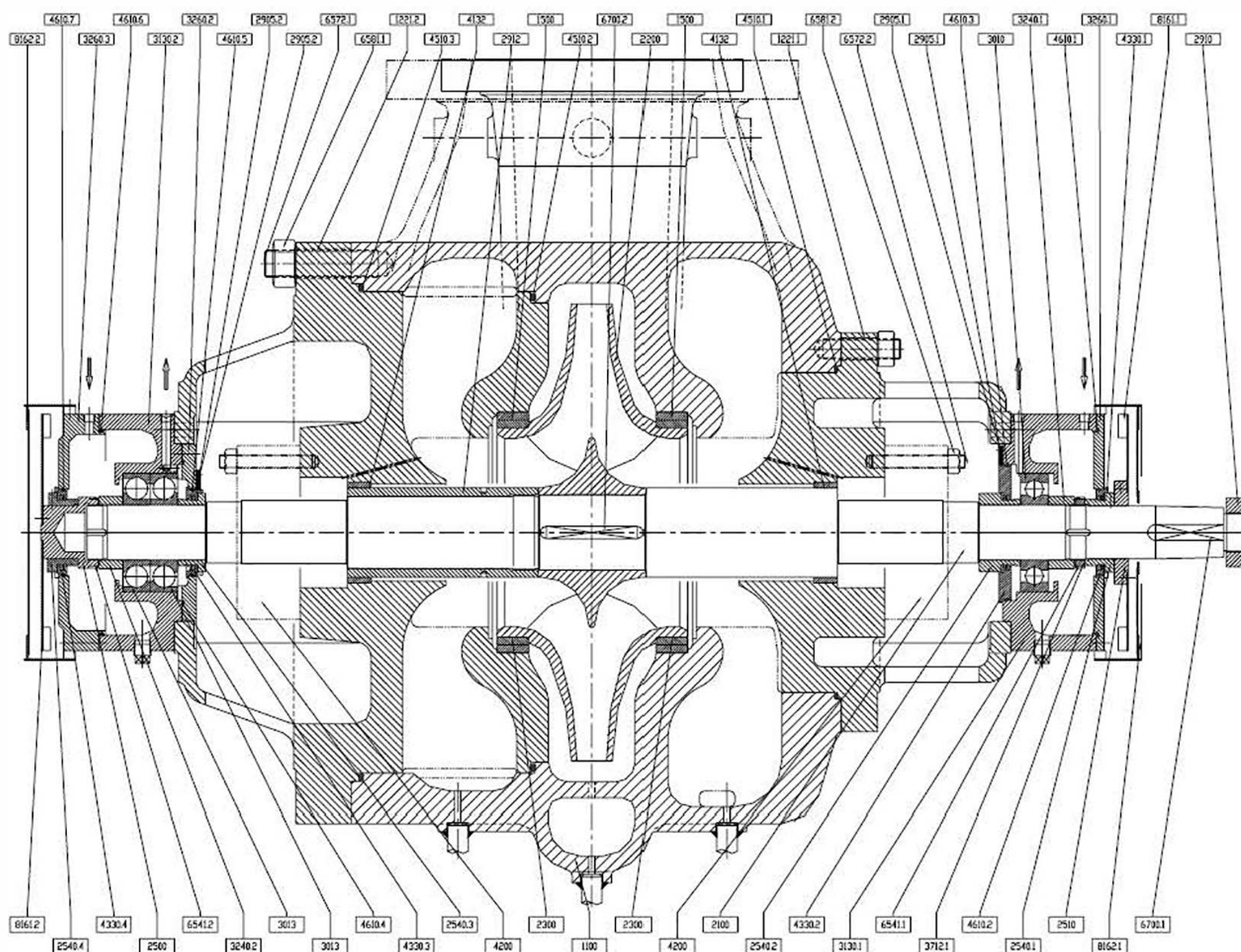
8.3.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2500	Ring
2510	Spacer Ring
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
2540.4	Deflector
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket

Ref no	Description
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring
4330.4	Labyrinth Ring
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket

Ref no	Description
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
4610.4	"O" Ring
4610.5	"O" Ring
4610.6	"O" Ring
4610.7	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key
8161.1	Fan
8161.2	Fan
8162.1	Cover
8162.2	Cover

8.4 HDX Antifriction Bearing + Oil Mist Lubrication + Fan Cooling



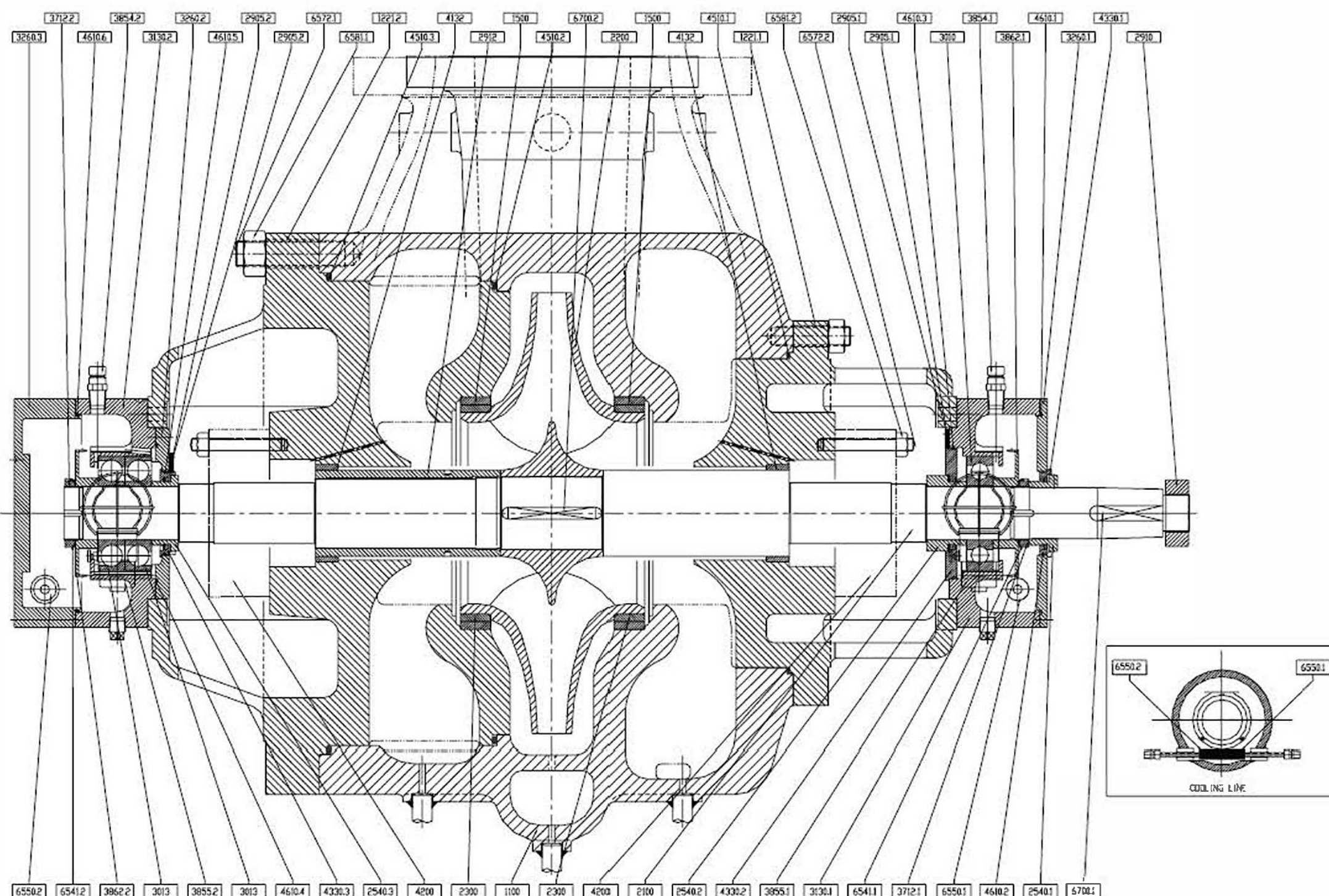
8.4.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2500	Ring
2510	Spacer Ring
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
2540.4	Deflector
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing

Ref no	Description
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3240.1	Intermediate Bearing Sleeve
3240.2	Intermediate Bearing Sleeve
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
4132	Stuffing Box Bushing
4200	Mechanical Seal
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring
4330.4	Labyrinth Ring
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket
4610.1	"O" Ring
4610.2	"O" Ring

Ref no	Description
4610.3	"O" Ring
4610.4	"O" Ring
4610.5	"O" Ring
4610.6	"O" Ring
4610.7	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key
8161.1	Fan
8161.2	Fan
8162.1	Cover
8162.2	Cover

8.5 HDX Antifriction Bearing + Slinger Lubrication + Water Cooling



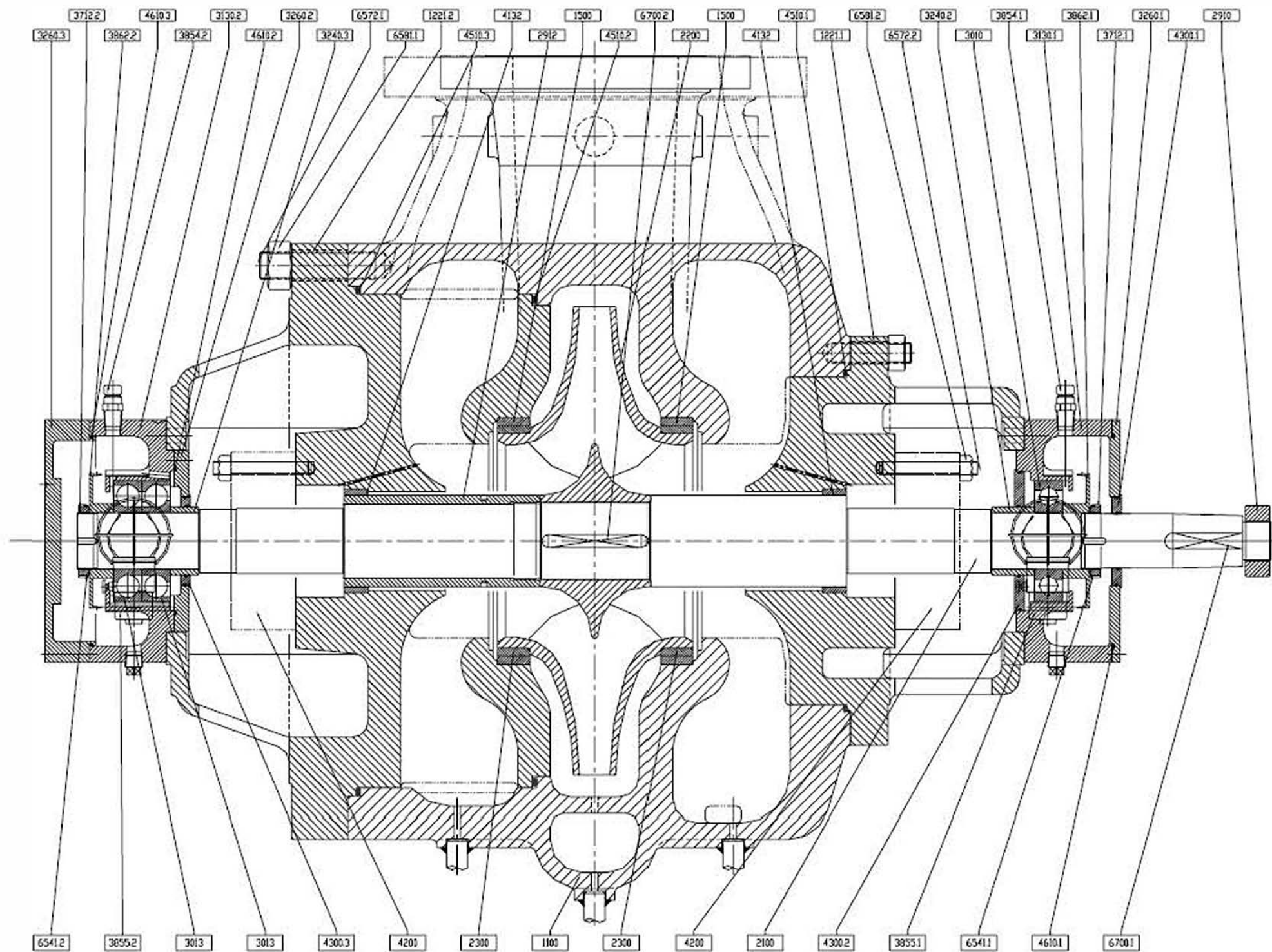
8.5.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket
3130.2	Bearing Bracket

Ref no	Description
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3712.2	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring
4510.1	Gasket
4510.2	Gasket

Ref no	Description
4510.3	Gasket
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
4610.4	"O" Ring
4610.5	"O" Ring
4610.6	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6550.1	Cooling Line
6550.2	Cooling Line
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.6 HDX Antifriction Bearing + Slinger Lubrication + Inpro Seals



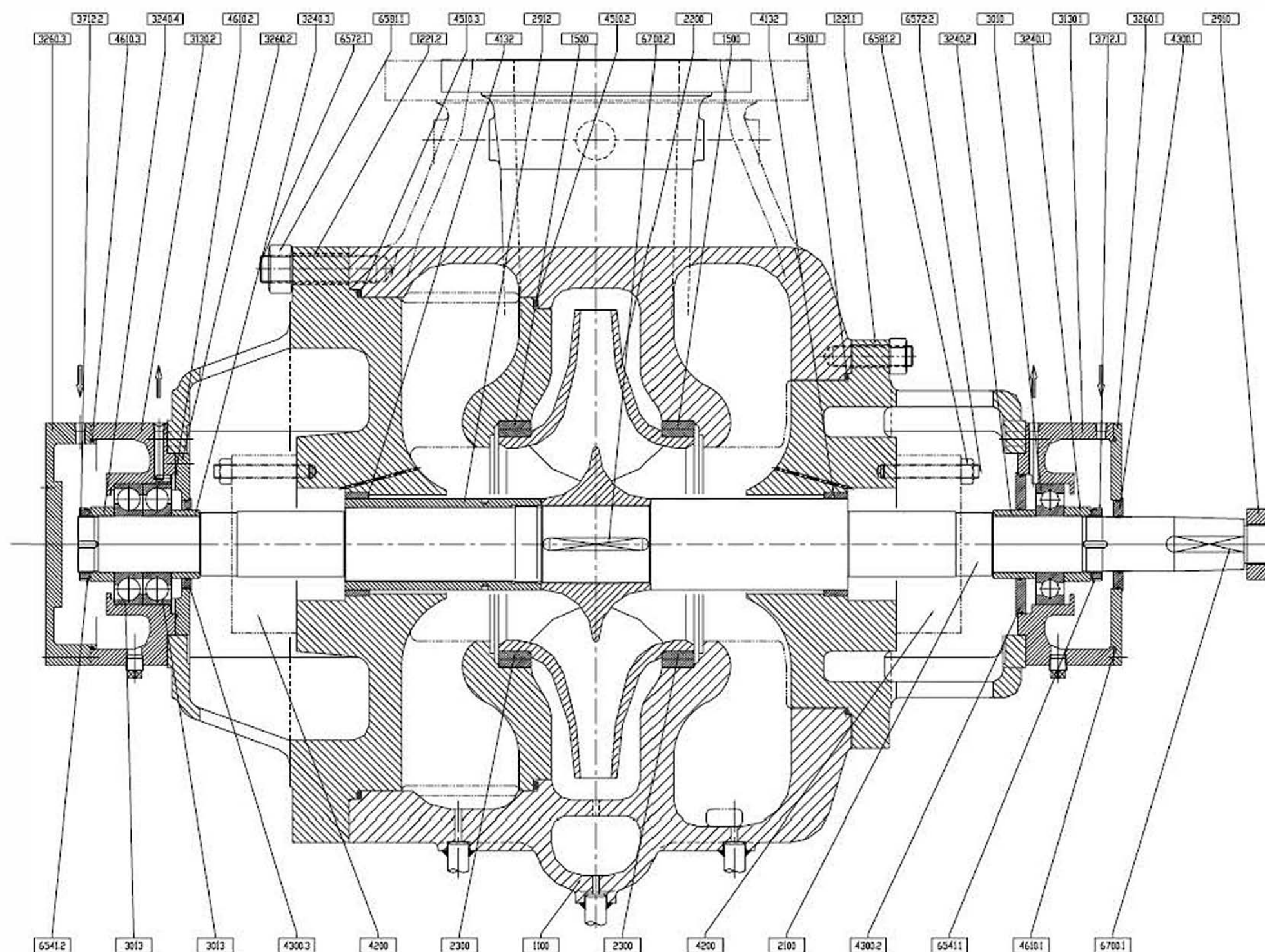
8.6.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket
3130.2	Bearing Bracket

Ref no	Description
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3712.2	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4300.1	Inpro Seals
4300.2	Inpro Seals

Ref no	Description
4300.3	Inpro Seals
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.7 HDX Antifriction Bearing + Oil Mist Lubrication + Inpro Seals



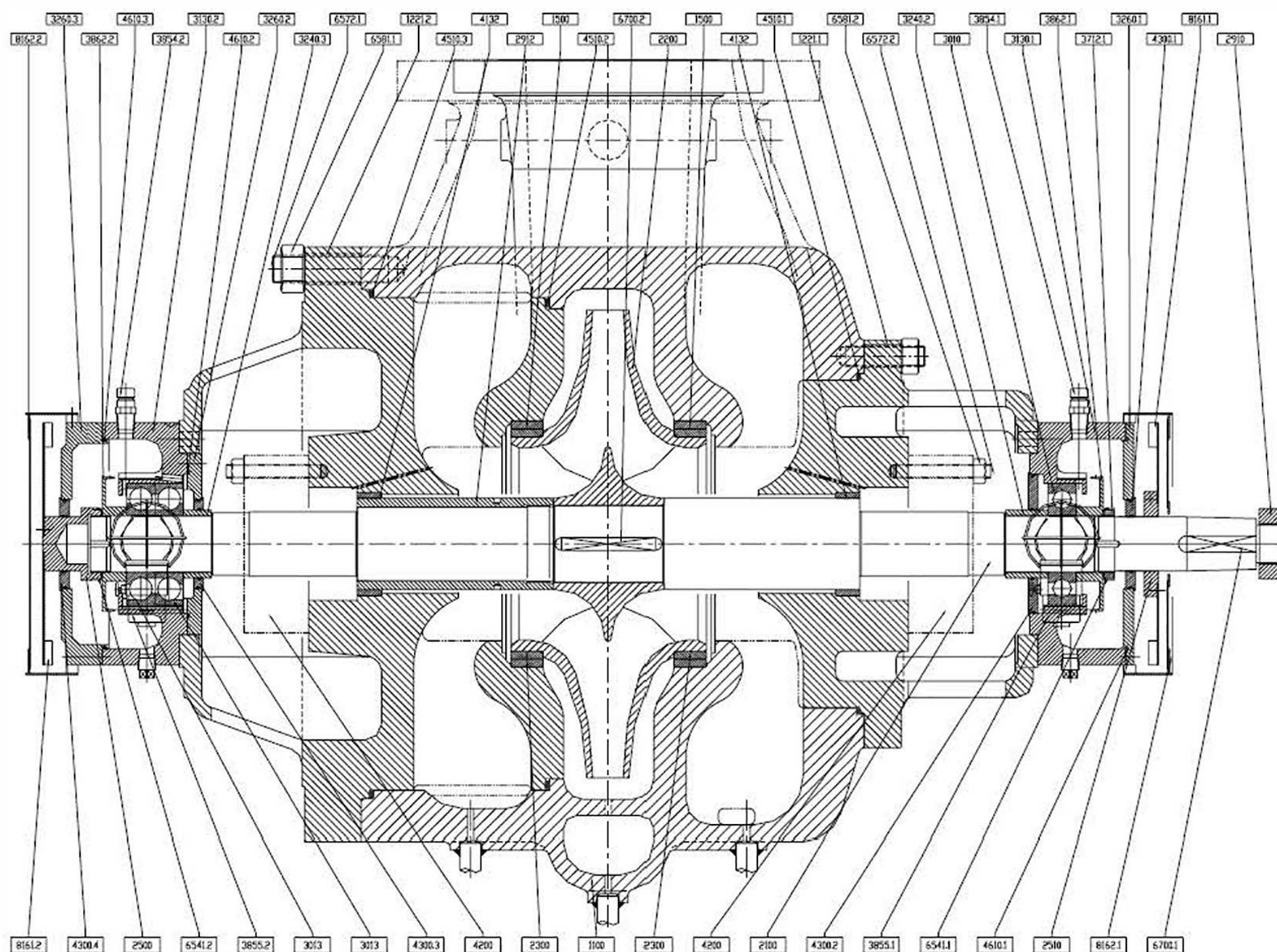
8.7.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket

Ref no	Description
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3712.2	Bearing Nut
4132	Stuffing Box Bushing
4200	Mechanical Seal
4300.1	Inpro Seals
4300.2	Inpro Seals
4300.3	Inpro Seals
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket

Ref no	Description
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.8 HDX Antifriction Bearing + Slinger Lubrication + Inpro Seals + Fan Cooling



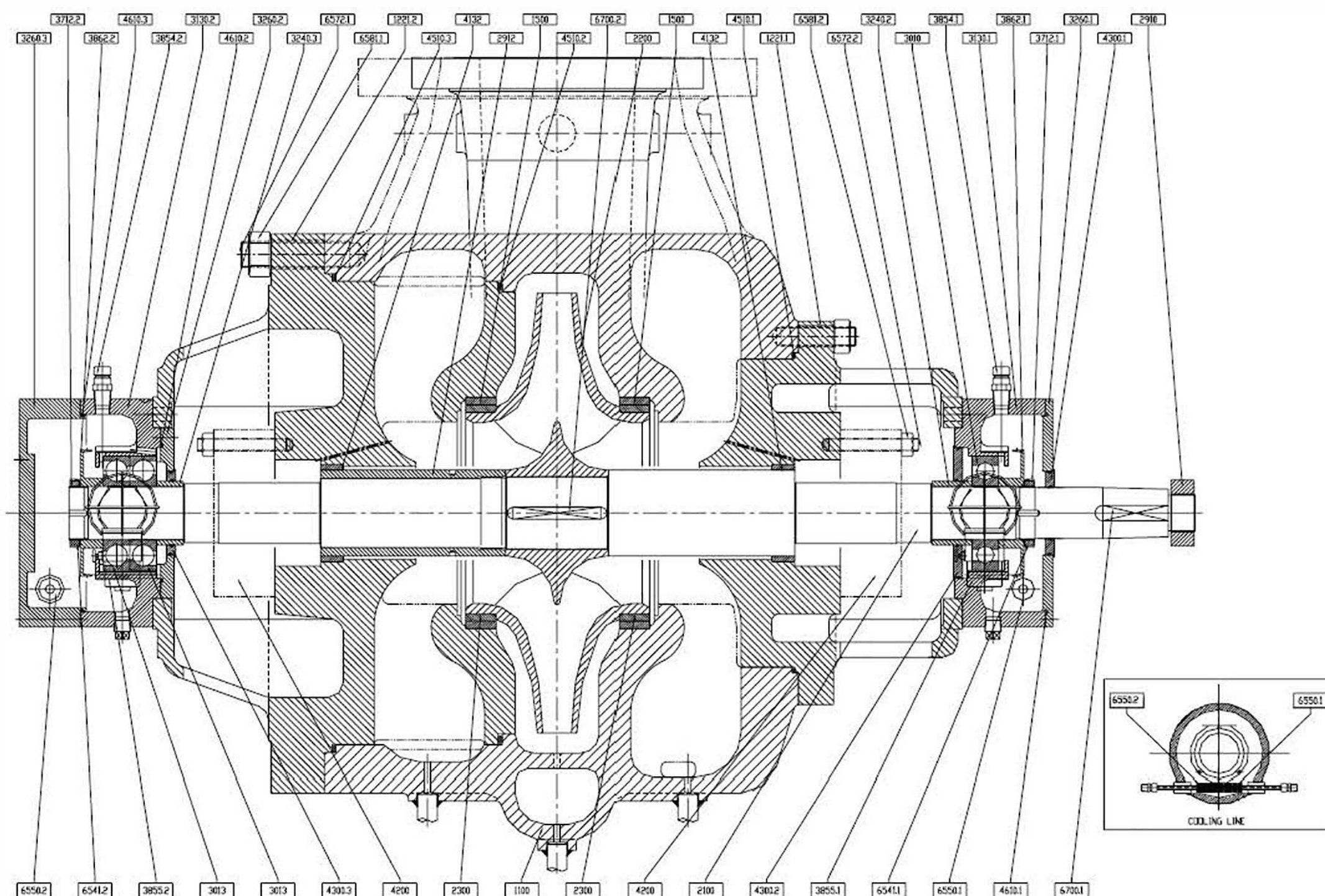
8.8.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2500	Ring
2510	Spacer Ring
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3260.1	Bearing Cover

Ref no	Description
3260.2	Bearing Cover
3260.3	Bearing Cover
3712.1	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4300.1	Inpro Seal
4300.2	Labyrinth Ring
4300.3	Labyrinth Ring
4300.4	Labyrinth Ring
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket

Ref no	Description
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key
8161.1	Fan
8161.2	Fan
8162.1	Cover
8162.2	Cover

8.9 HDX Antifriction Bearing + Slinger Lubrication + Inpro Seals + Water Cooling



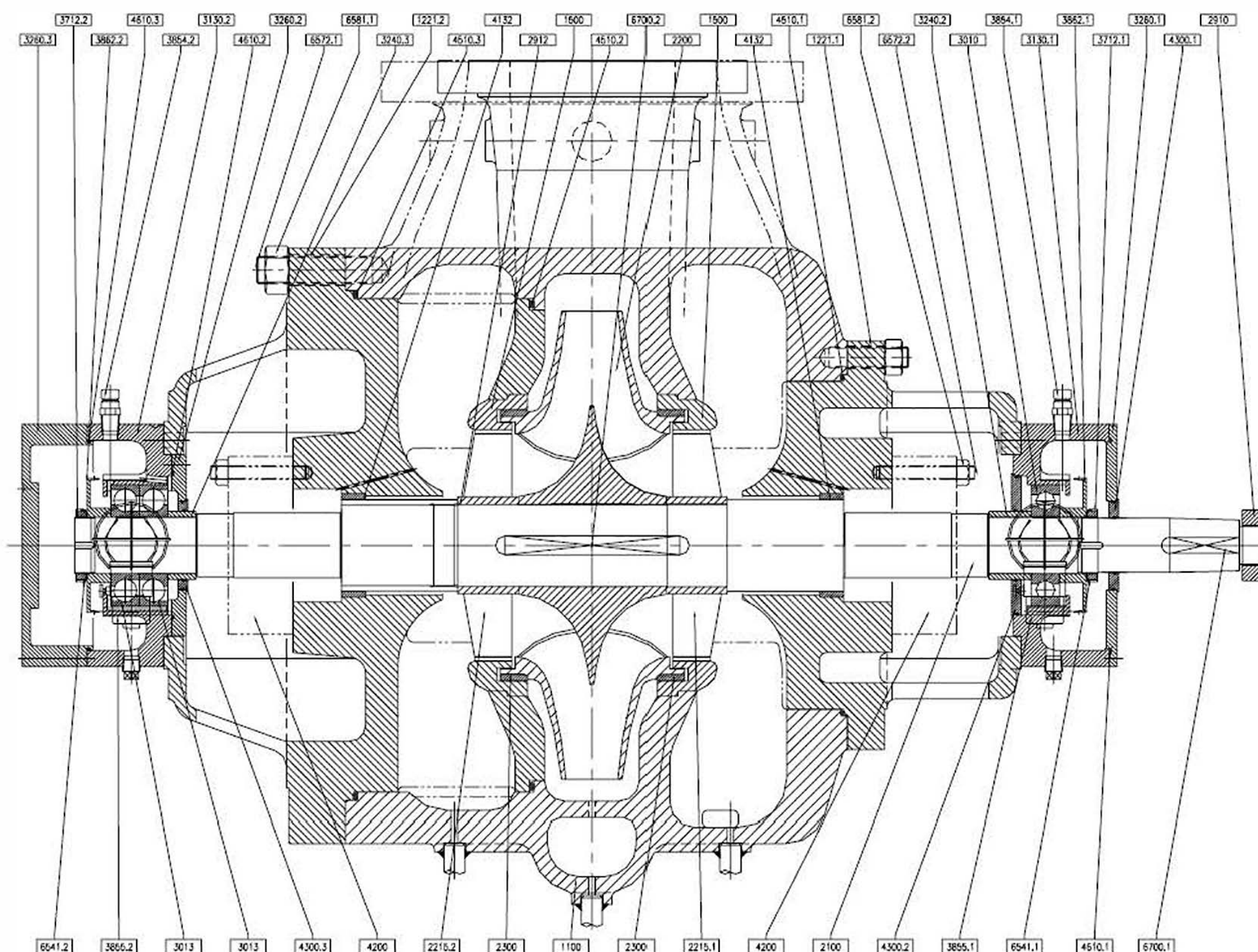
8.9.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2300	Impeller Wear Ring
2905.1	Washer
2905.2	Washer
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover

Ref no	Description
3260.3	Bearing Cover
3712.1	Bearing Nut
3712.2	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4300.1	Inpro Seal
4300.2	Inpro Seal
4300.3	Inpro Seal
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket

Ref no	Description
4610.1	"O" Ring
4610.2	"O" Ring
4610.3	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6550.1	Cooling Line
6550.2	Cooling Line
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.10 HDX Antifriction Bearing + Coke Crusher



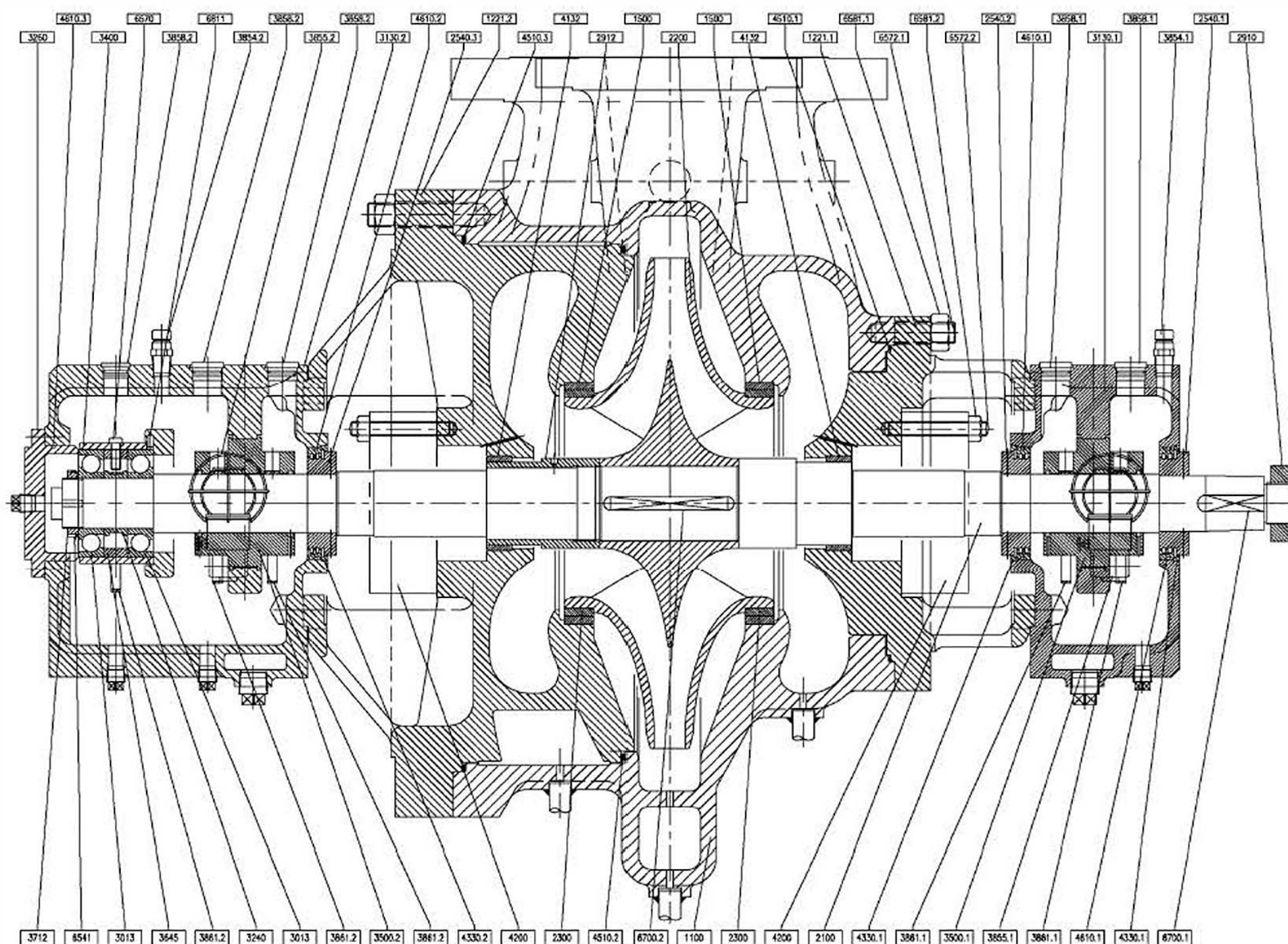
8.10.1 Parts list

Ref no	Description
1100	Casing
1221.1	Casing Cover
1221.2	Casing Cover
1500	Casing Wear ring
2100	Shaft
2200	Impeller
2215.1	Coke Crusher
2215.2	Coke Crusher
2300	Impeller Wear Ring
2910	Shaft Nut
2912	Impeller Nut
3010	Anti-Friction Bearing
3013	Thrust Ball bearing
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover

Ref no	Description
3712.1	Bearing Nut
3712.2	Bearing Nut
3854.1	Oil Filter Plug
3854.2	Oil Filter Plug
3855.1	Constant Level Oiler
3855.2	Constant Level Oiler
3862.1	Lubricating Disk Thrower
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
4200	Mechanical Seal
4300.1	Inpro Seal
4300.2	Inpro Seal
4300.3	Inpro Seal
4510.1	Gasket
4510.2	Gasket
4510.3	Gasket
4610.1	"O" Ring

Ref no	Description
4610.2	"O" Ring
4610.3	"O" Ring
6541.1	Lock washer
6541.2	Lock washer
6550.1	Cooling Line
6550.2	Cooling Line
6572.2	Stud
6572.1	Stud
6581.1	Hexagon Nut
6581.2	Hexagon Nut
6700.1	Key
6700.2	Key

8.11 HDX Sleeve Ball Bearing + Oil Ring Lubrication



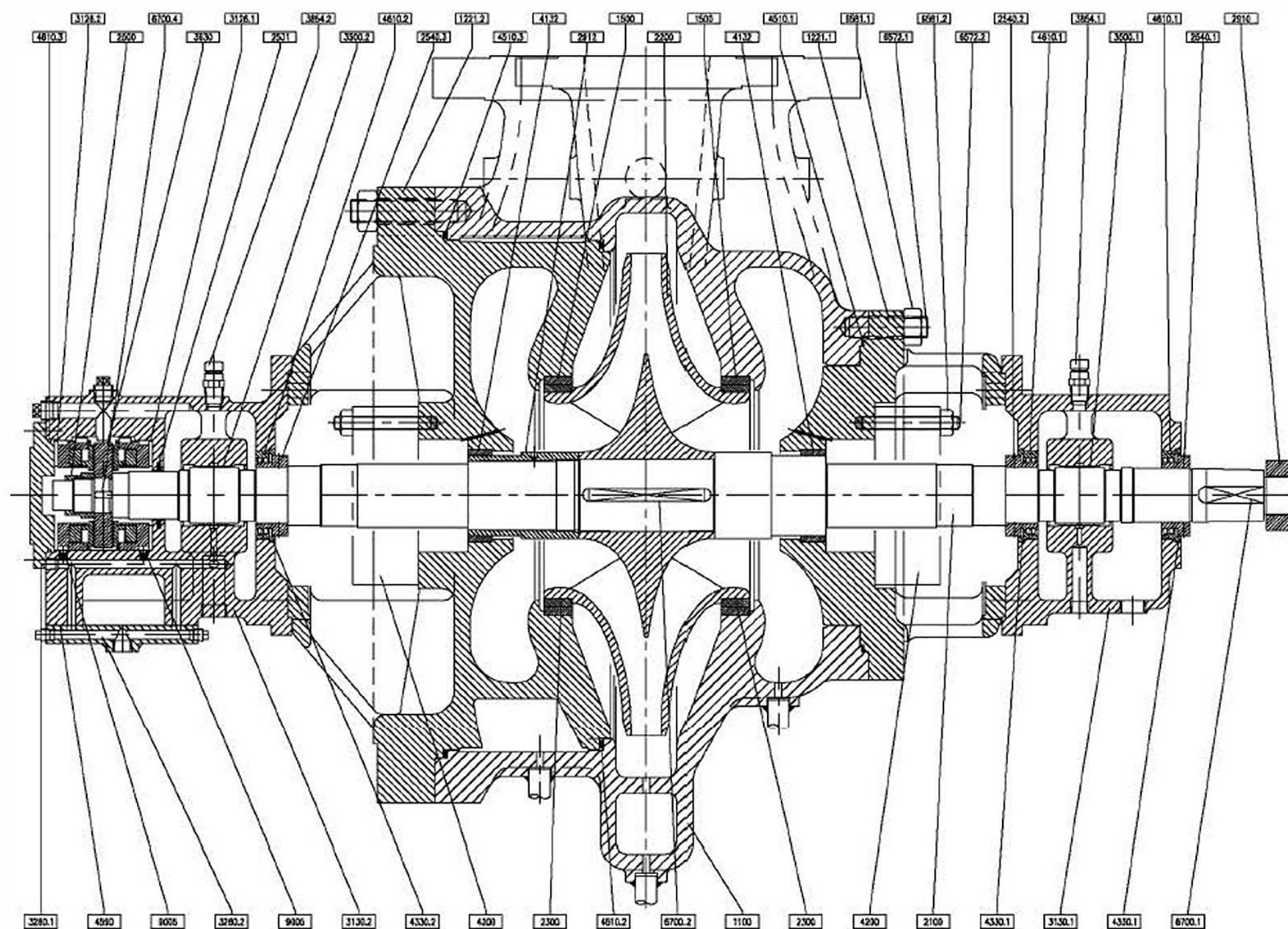
8.11.1 Parts list

Ref no	Description
3013	Thrust Bearing
3400	Bearing Sleeve
3500	Bearing Shell
4510.3	Spiral Wound Gasket
4510.2	Spiral Wound Gasket
4510.1	Spiral Wound Gasket
2912	Impeller Nut
2910	Shaft Nut
3712	Bearing Lock Nut Washer
3855	Constant Level Oiler
4610.1	'O' Ring
4610.2	'O' Ring
4610.3	'O' Ring
4610.4	'O' Ring
4610.5	'O' Ring

Ref no	Description
4200	Mechanical Seal
3854	Oil Filler Plug
1100	Pump Casing
1221.1	Casing Cover
1221.2	Casing Cover
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
1500	Casing Wear Ring
2300	Impeller Wear Ring
2200	Impeller
2100	Pump Shaft
3861	Slinger

Ref no	Description
3240	Intermediate Bearing Sleeve
4132	Stuffing Box Bushing
6700.1	Key
6700.2	Key
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring
3645	Disk Spacer
6541	Lockwasher
6572.1	Stud
6572.2	Stud
6581	Hexagon Nut

8.12 HDX Sleeve KTB Bearing + Forced Feed Lubrication



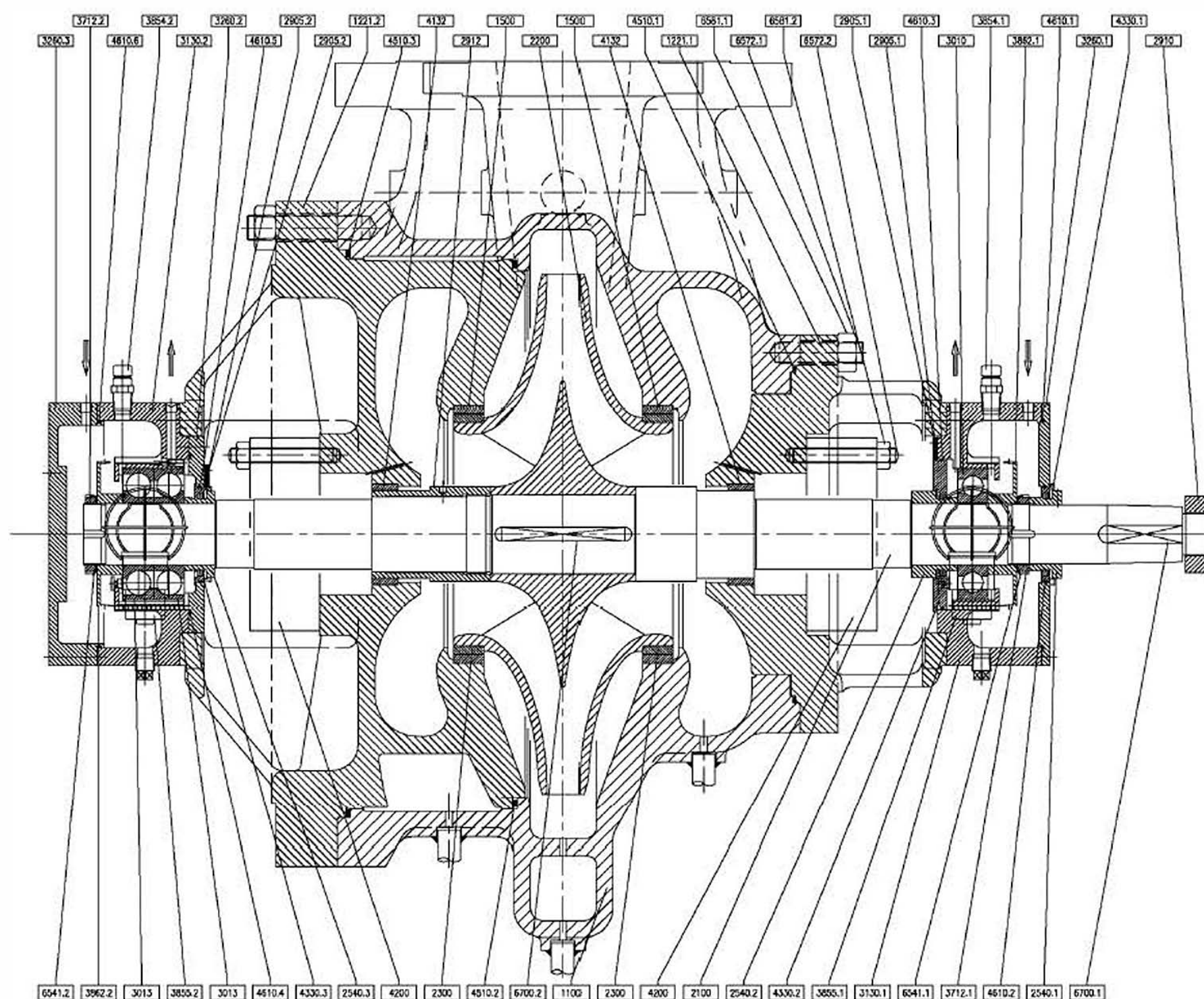
8.12.1 Parts list

Ref no	Description
3630	Thrust Bearing Pad
3500	Bearing Shell
3126.1	Shim
3126.2	Shim
2531	Split Retaining Ring
2500	Ring
9005	Orifice
4510.3	Spiral Wound Gasket
4510.2	Spiral Wound Gasket
4510.1	Spiral Wound Gasket
2912	Impeller Nut
2910	Shaft Nut
4610.1	'O' Ring
4610.2	'O' Ring
4610.3	'O' Ring

Ref no	Description
4200	Mechanical Seal
3854	Oil Filter Plug
1100	Pump Casing
1221.1	Casing Cover
1221.2	Casing Cover
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
1500	Casing Wear Ring
2300	Impeller Wear Ring
2200	Impeller
2100	Pump Shaft
4132	Stuffing Box Bushing

Ref no	Description
6700.1	Key
6700.2	Key
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
6572.1	Stud
6572.2	Stud
6581	Hexagon Nut

8.13 HDX Antifriction Bearing + Purge Oil Mist



8.13.1 Parts list

Ref no	Description
3013	Thrust Bearing
3010	Radial Bearing
4510.3	Spiral Wound Gasket
4510.2	Spiral Wound Gasket
4510.1	Spiral Wound Gasket
2912	Impeller Nut
2910	Shaft Nut
3712	Bearing Lock Nut Washer
3855	Constant Level Oiler
4610.1	'O' Ring
4610.2	'O' Ring
4610.3	'O' Ring
4610.4	'O' Ring
4610.5	'O' Ring
4200	Mechanical Seal

Ref no	Description
3854.1	Oil Filler Plug
3854.2	Oil Filler Plug
1100	Pump Casing
1221.1	Casing Cover
1221.2	Casing Cover
3130.1	Bearing Bracket
3130.2	Bearing Bracket
3260.1	Bearing Cover
3260.2	Bearing Cover
3260.3	Bearing Cover
1500	Casing Wear Ring
2300	Impeller Wear Ring
2200	Impeller
2100	Pump Shaft
3862.1	Lubricating Disk Thrower

Ref no	Description
3862.2	Lubricating Disk Thrower
4132	Stuffing Box Bushing
6700.1	Key
6700.2	Key
2540.1	Deflector
2540.2	Deflector
2540.3	Deflector
4330.1	Labyrinth Ring
4330.2	Labyrinth Ring
4330.3	Labyrinth Ring
2905	Washer
6541	Lockwasher
6572.1	Stud
6572.2	Stud
6581	Hexagon Nut