



## ***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

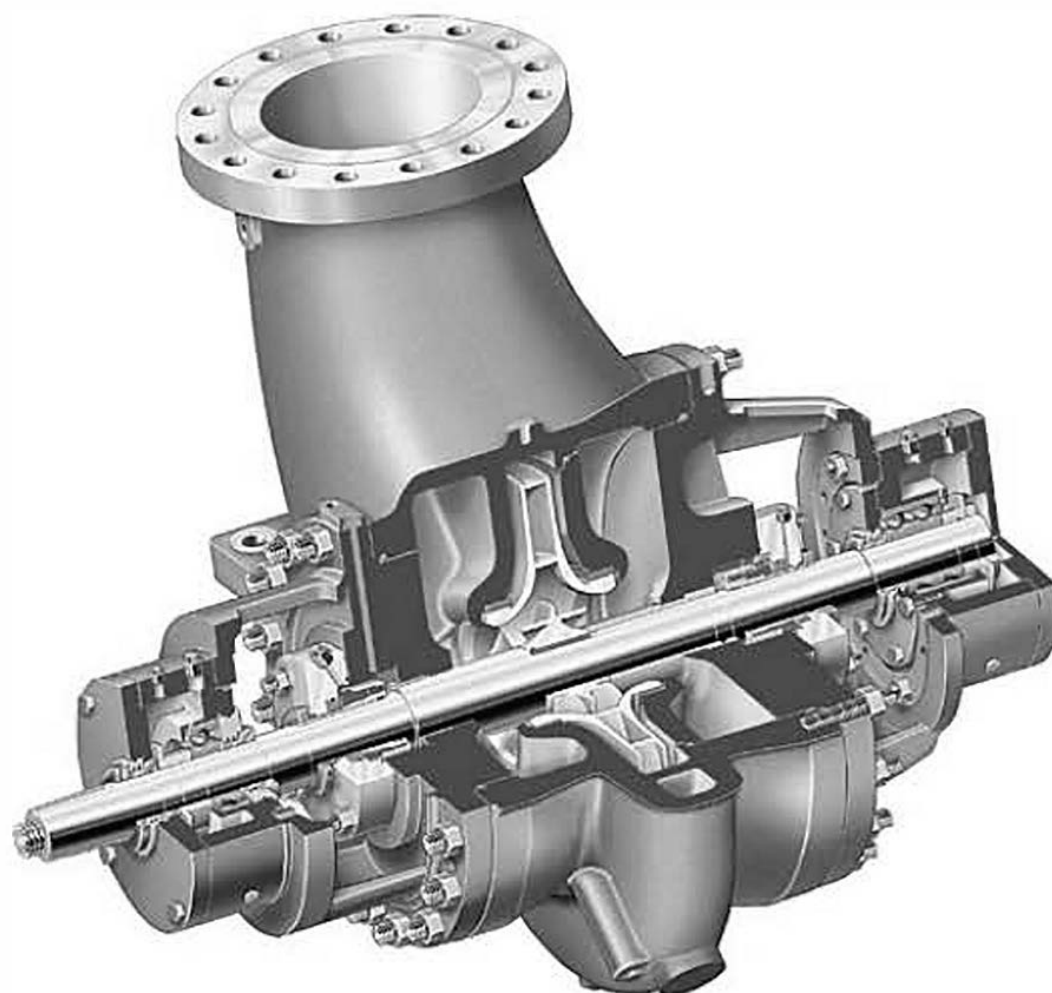
### **Recommended spares (according to API)**

#### *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)

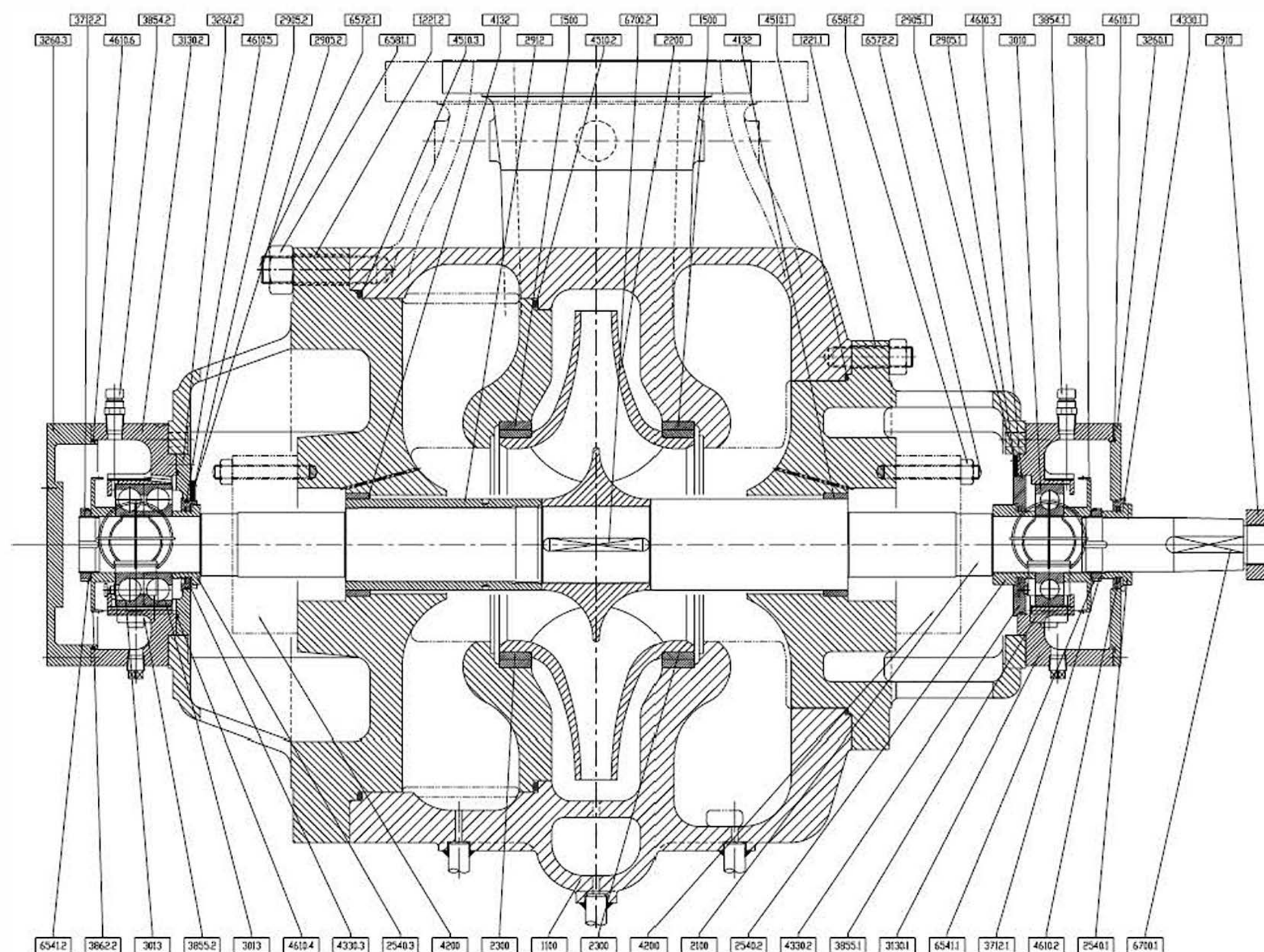
#### *For normal maintenance:*

- 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



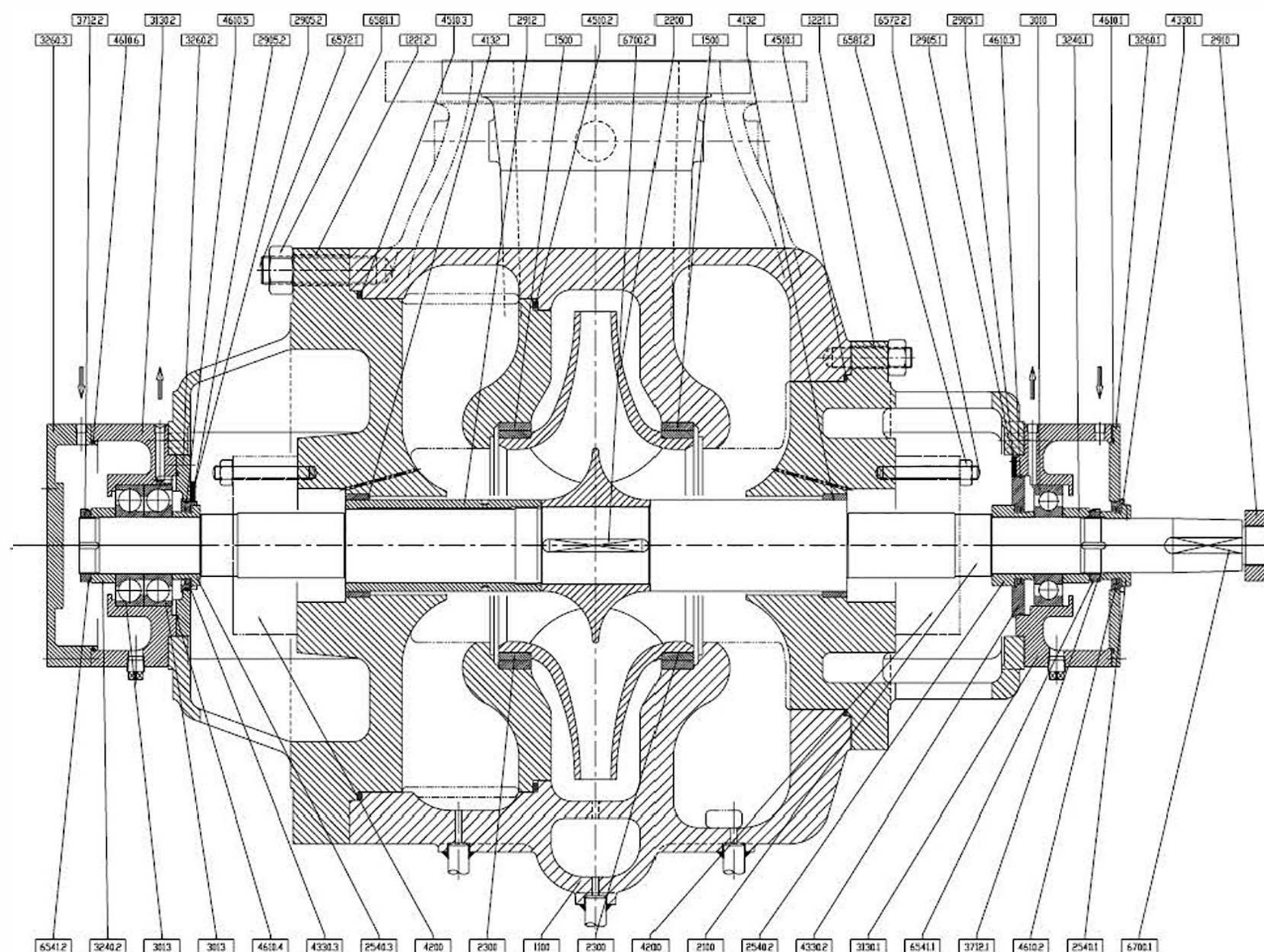
#### 8.1.1 Parts list

| 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



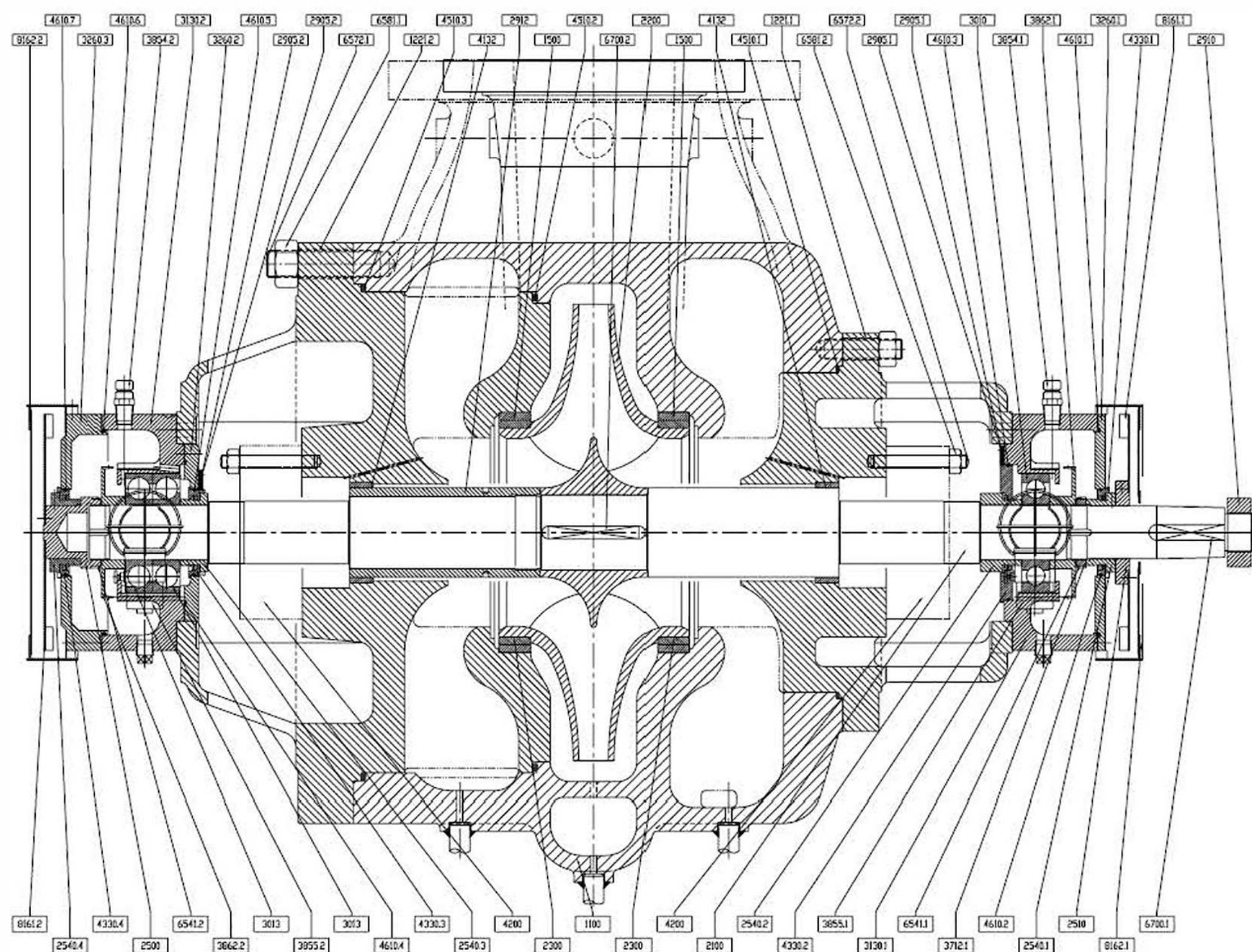
### 8.2.1 Parts list

| 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



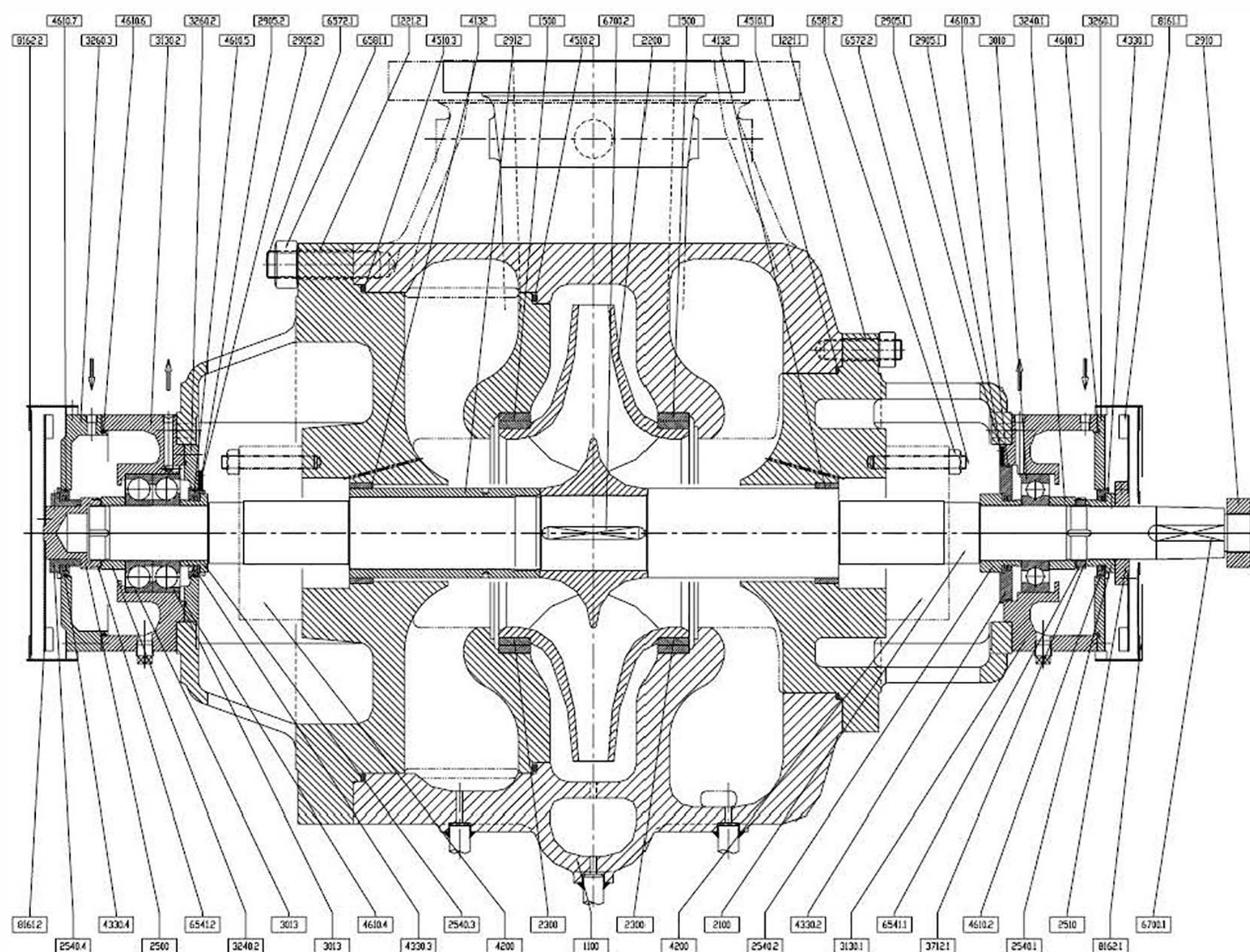
#### 8.3.1 Parts list

| 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



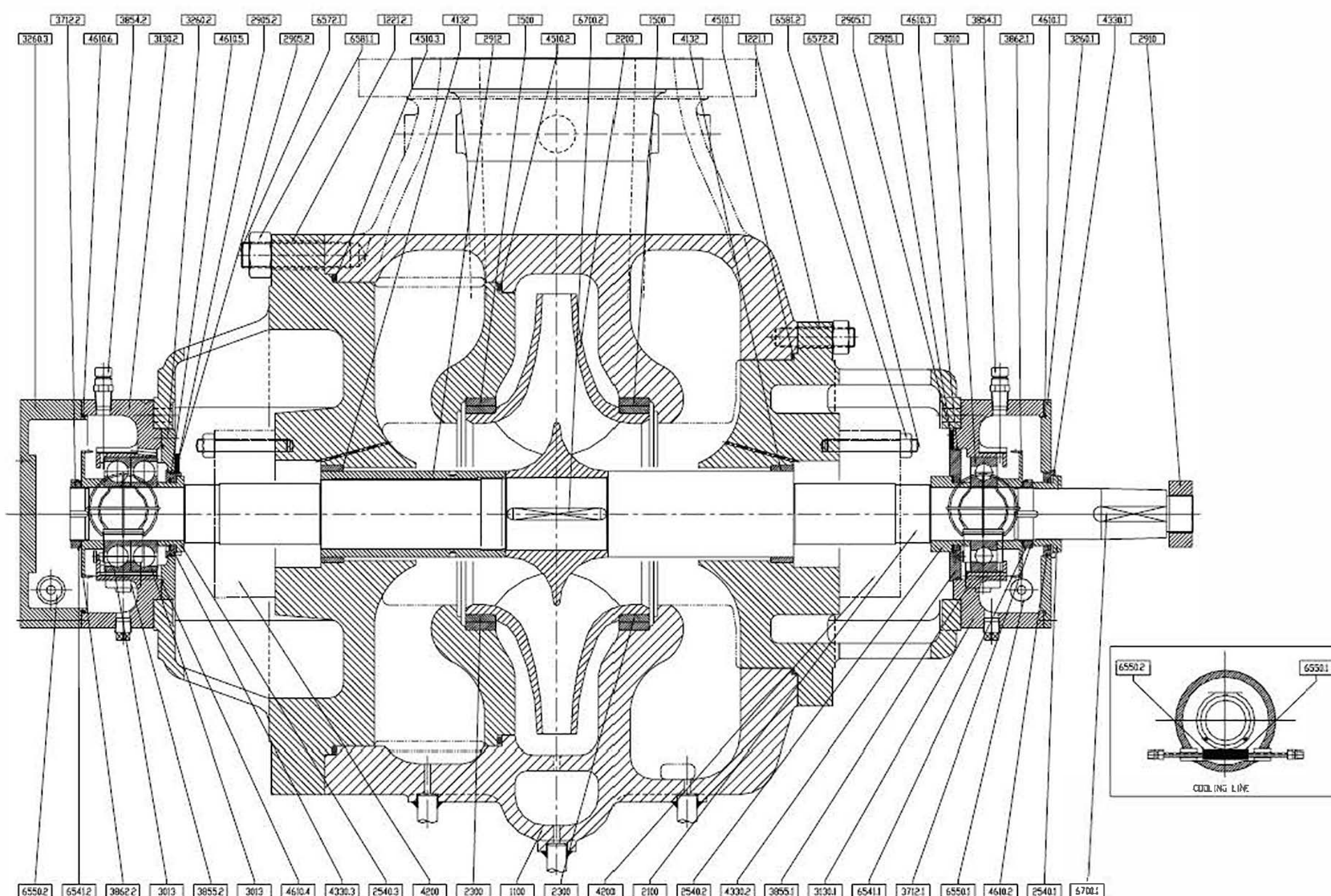
### 8.4.1 Parts list

| 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



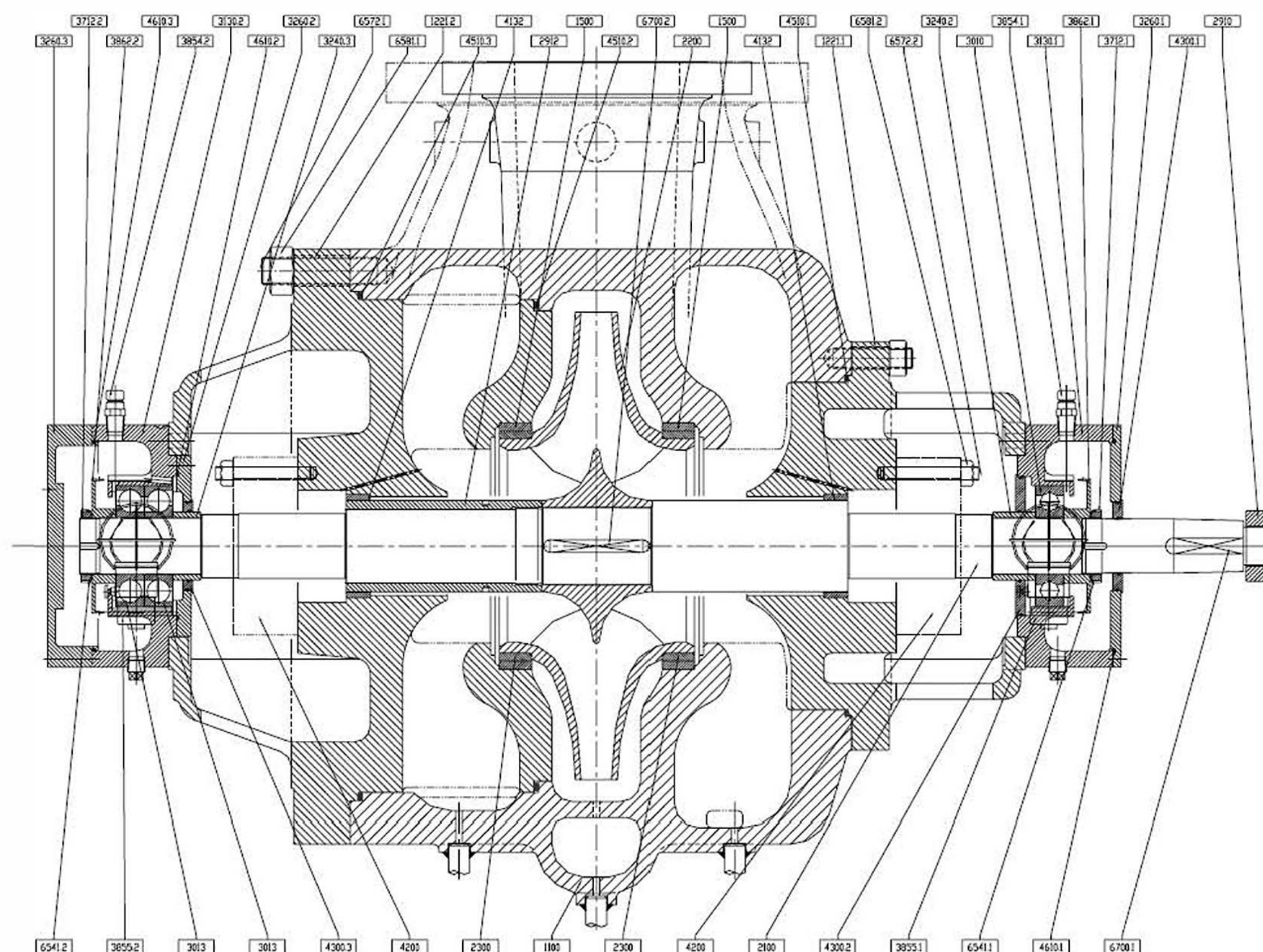
### 8.5.1 Parts list

| 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



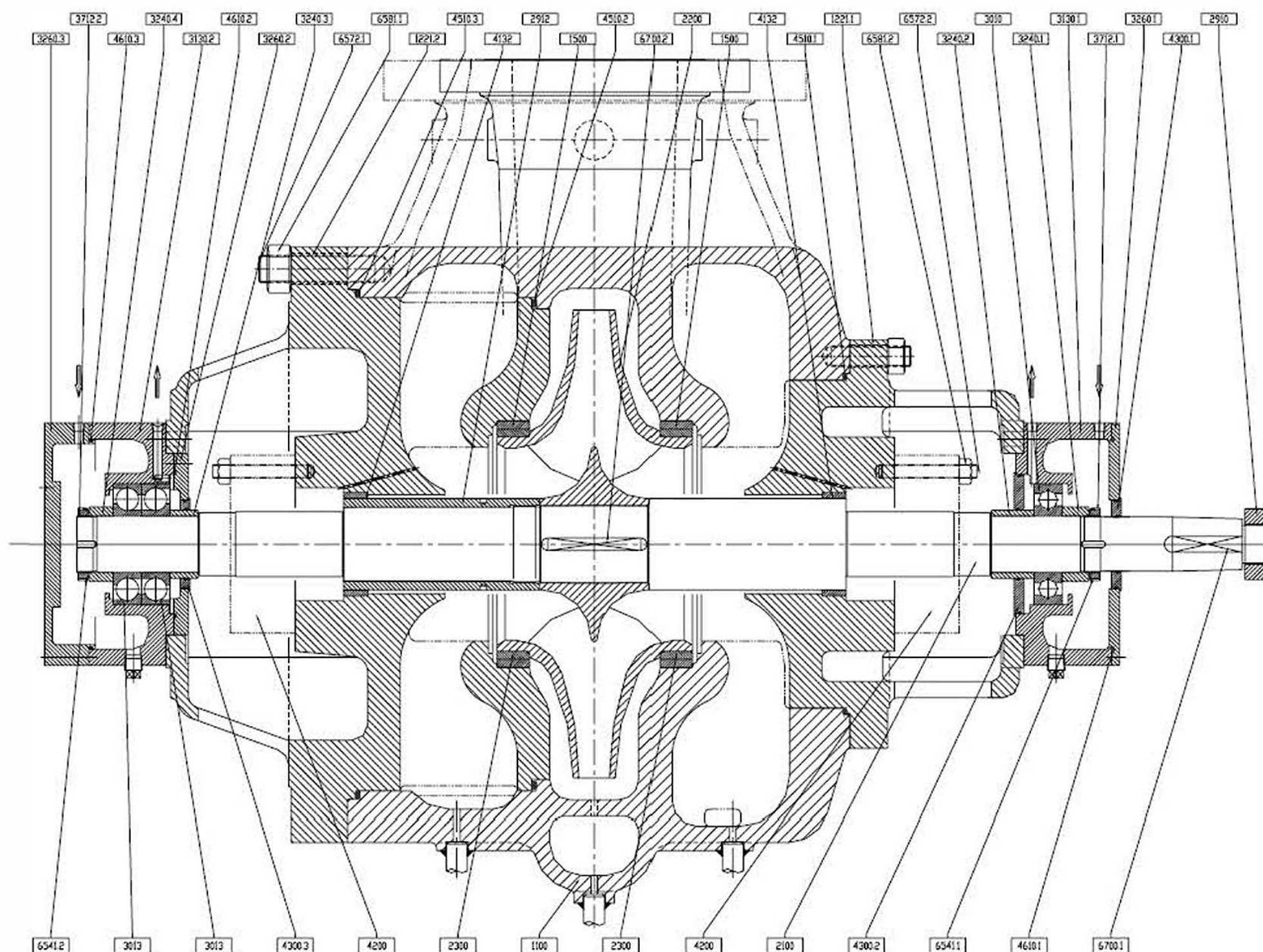
### 8.6.1 Parts list

| 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



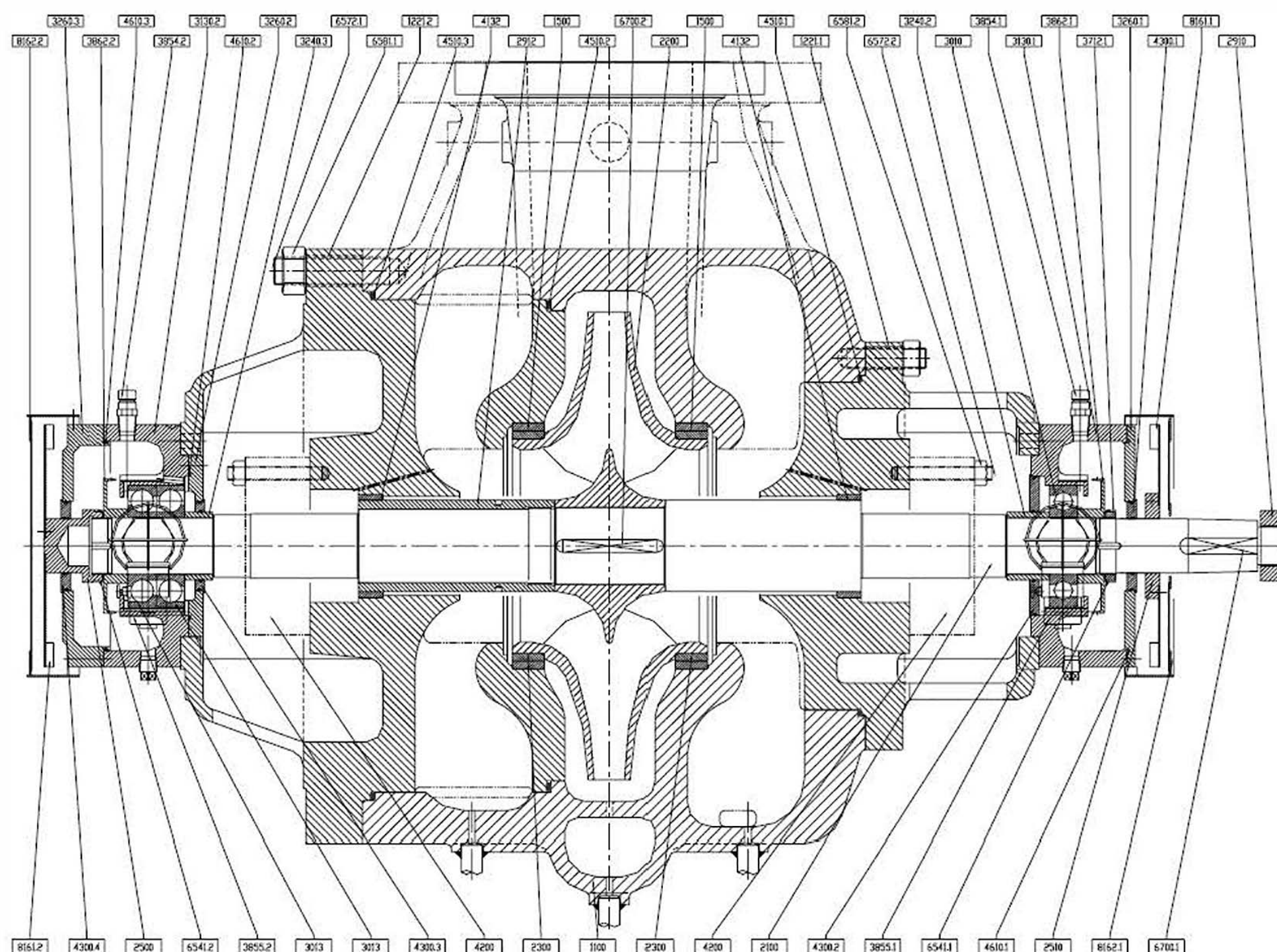
### 8.7.1 Parts list

| 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



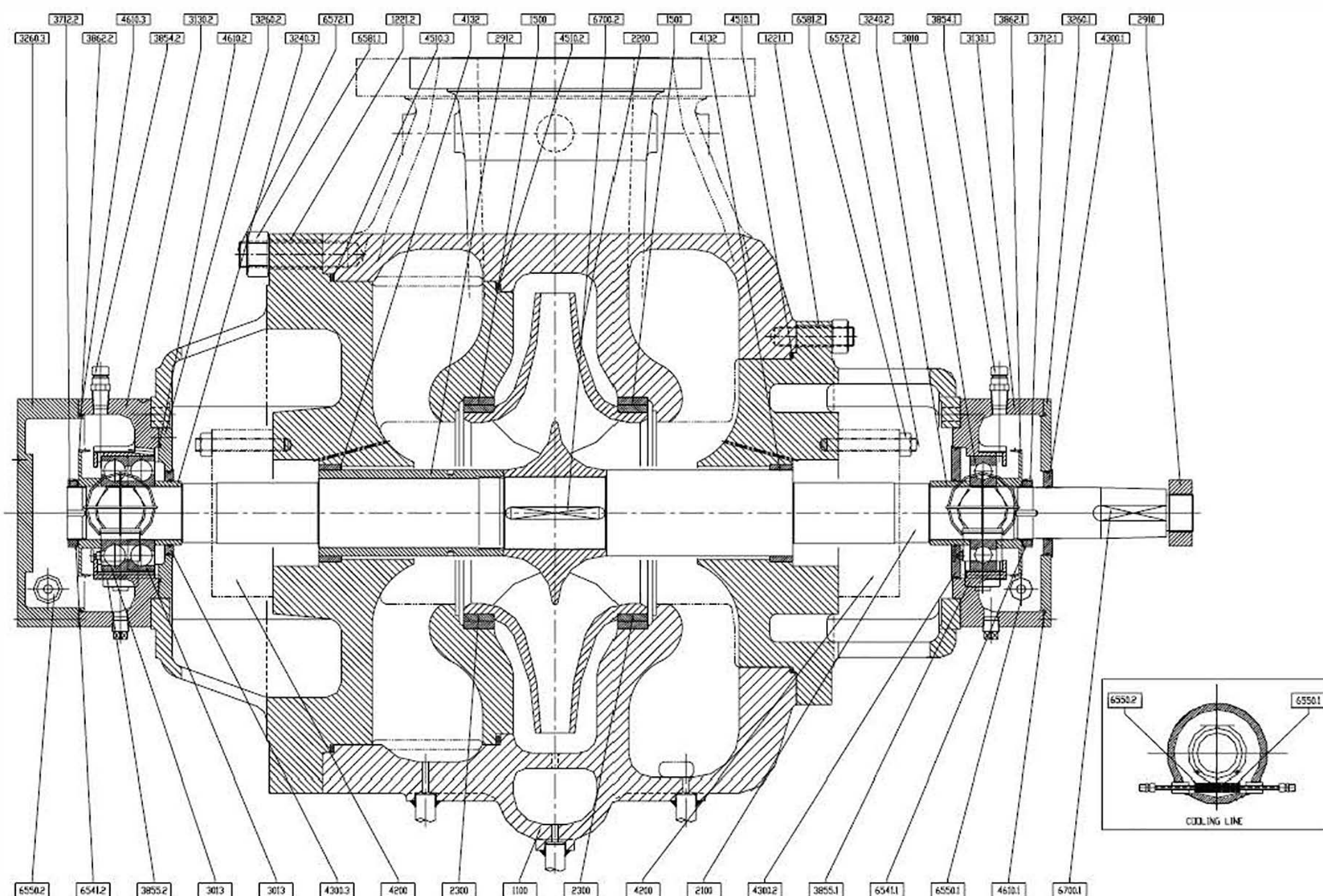
### 8.8.1 Parts list

| 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



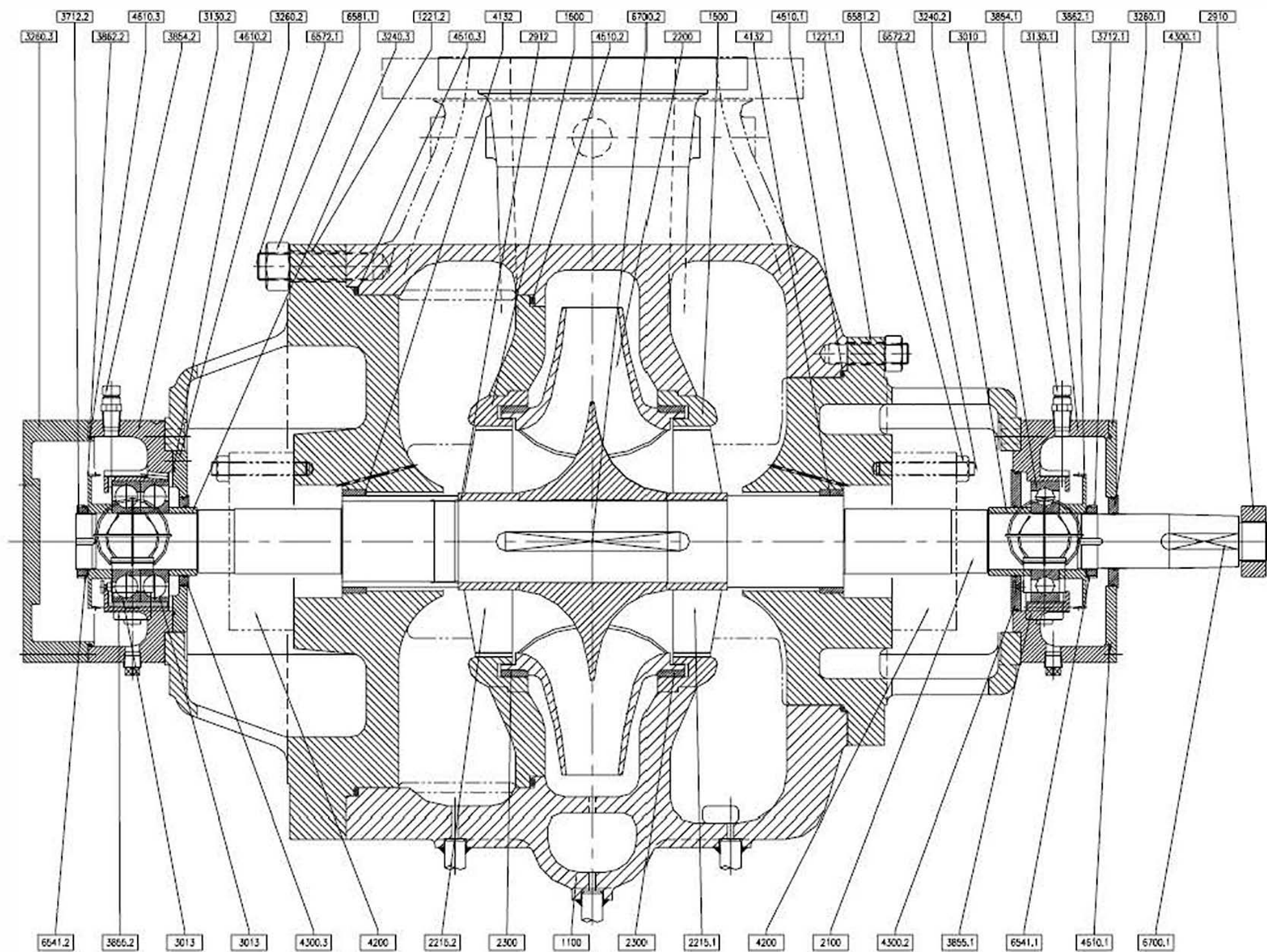
### 8.9.1 Parts list

| 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



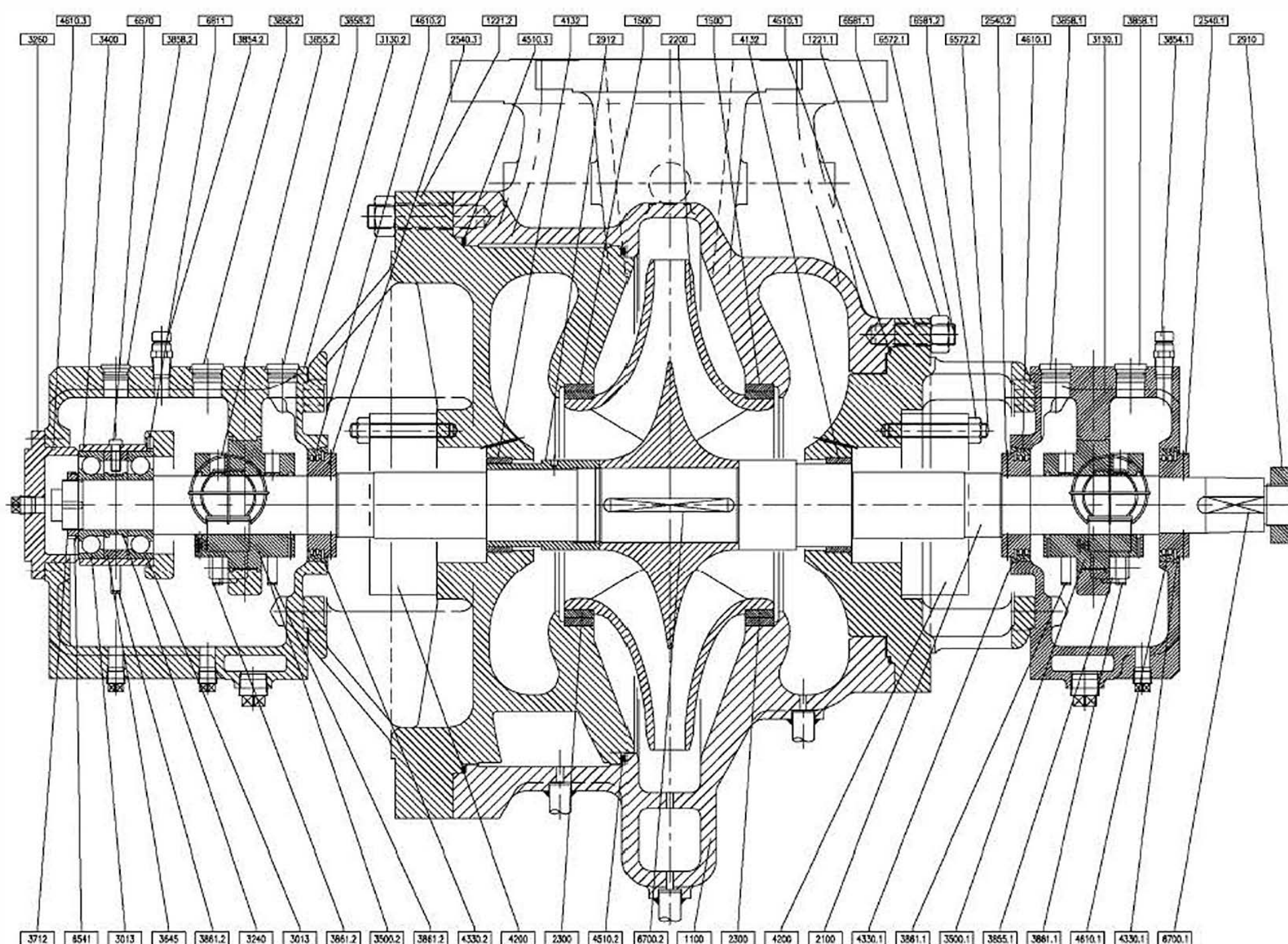
### 8.10.1 Parts list

| 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



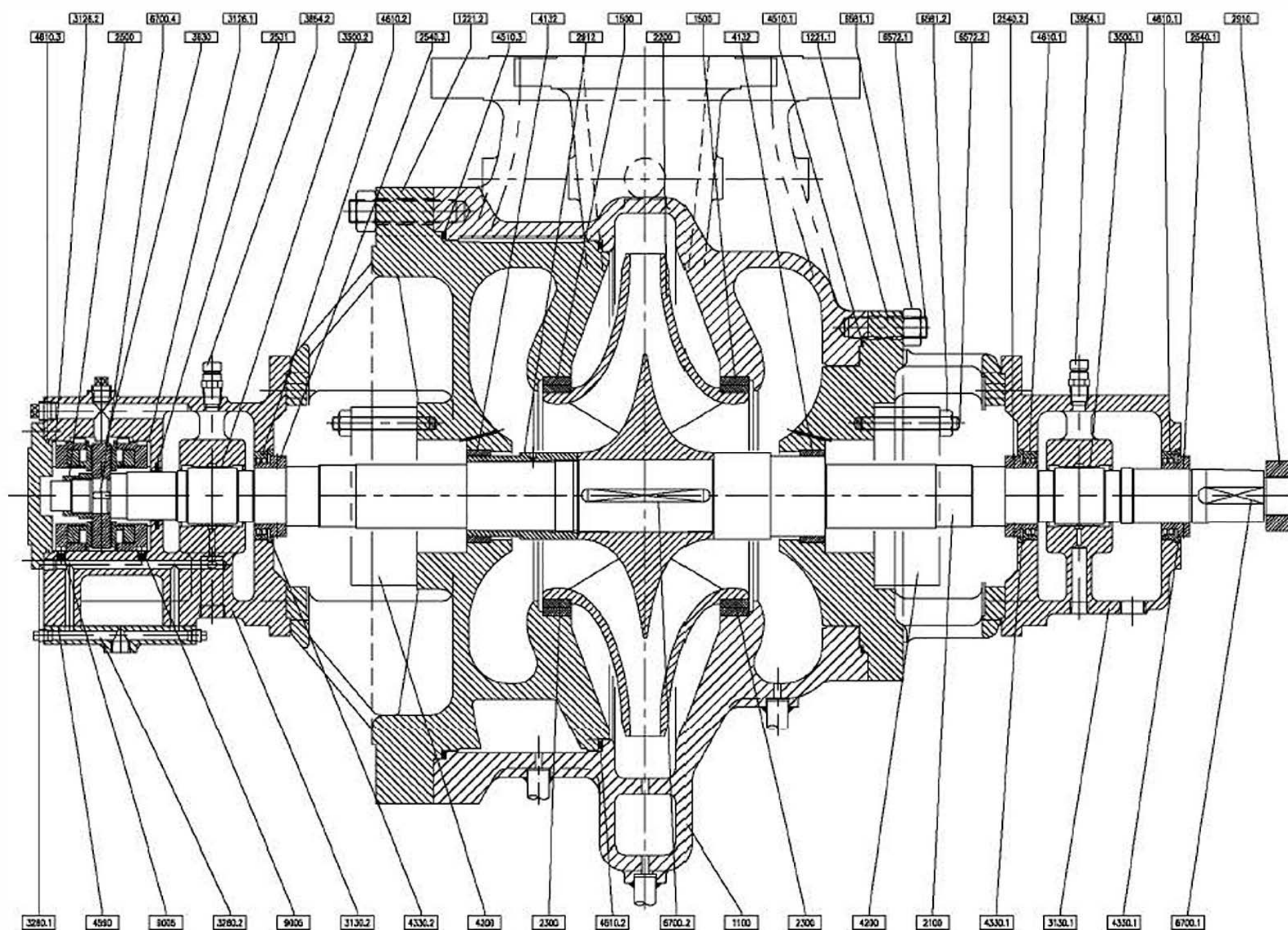
### 8.11.1 Parts list

| 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



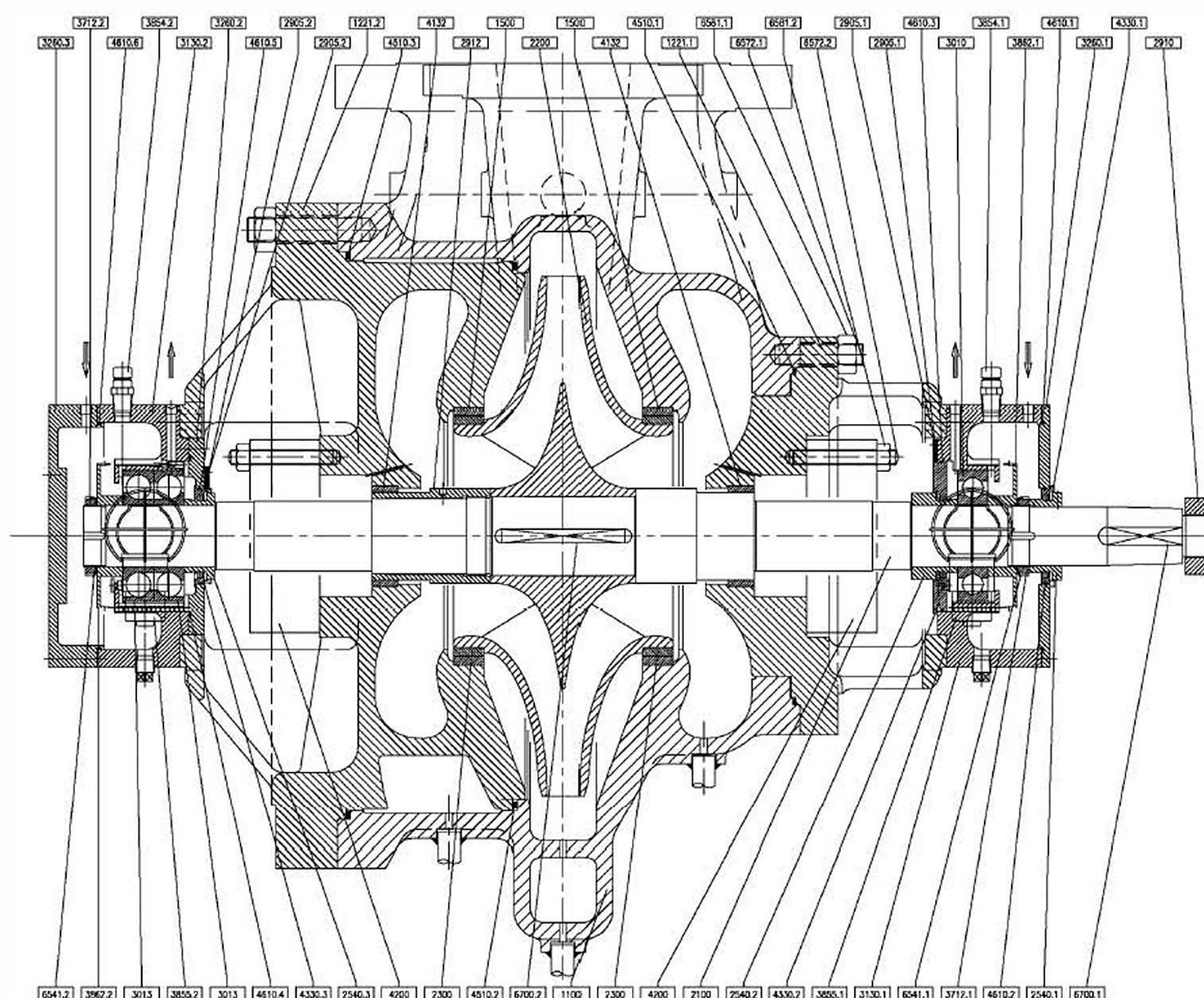
### 8.12.1 Parts list

| 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              |