BAB VI
PENUTUP

6.1. Kesimpulan

Dari hasil analisa dan pengumpulan data yang telah dilakukan, penurunanan Performance Reverse Osmosis pada kapal Baruna Jaya IV disebabkan oleh terjadinya kerusakan pada komponen membran.

Faktor-faktor penyebab kerusakan membran adalah :

1. Feed water (air umpan) yang digunakan memiliki salinitas dan tingkat kekotoran yang tinggi.
2. Tidak menjalankan perawatan membran sesuai dengan petunjuk operasional.

6.2. Saran

1. Pengoperasian sistem RO di perairan Indonesia sebaiknya hanya digunakan pada perairan tertentu yang belum tercemar.
2. Untuk menemukan kerusakan pada sistem, indikator dan pengukur tekanan agar diperiksa terlebih dahulu karena alat-alat ini berfungsi sebagai pengontrol komponen dari sistem. Bila pengontrol berfungsi dengan baik maka kerusakan yang lebih fatal bisa dicegah.

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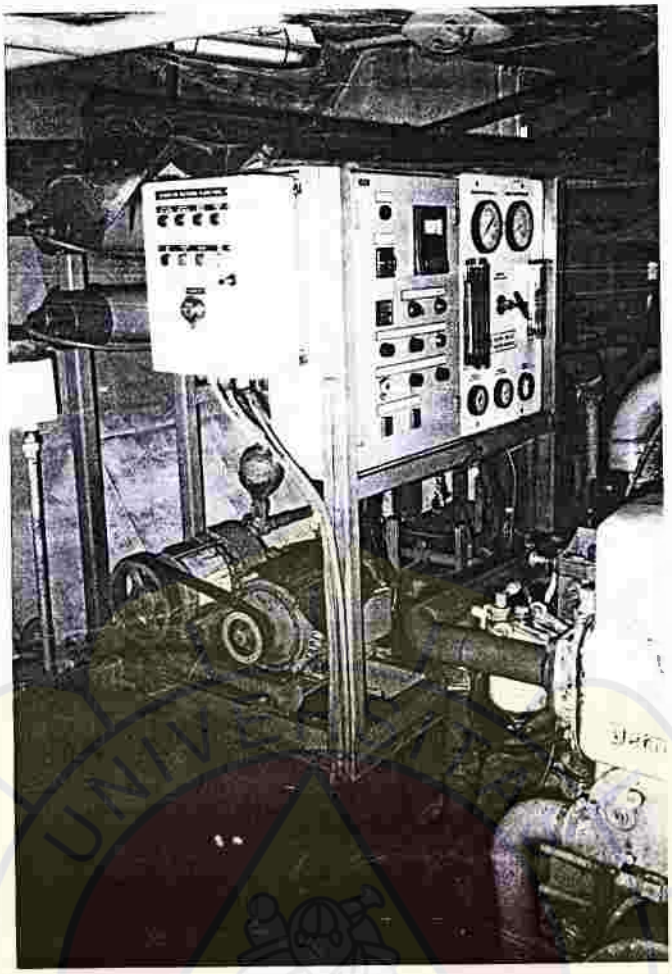

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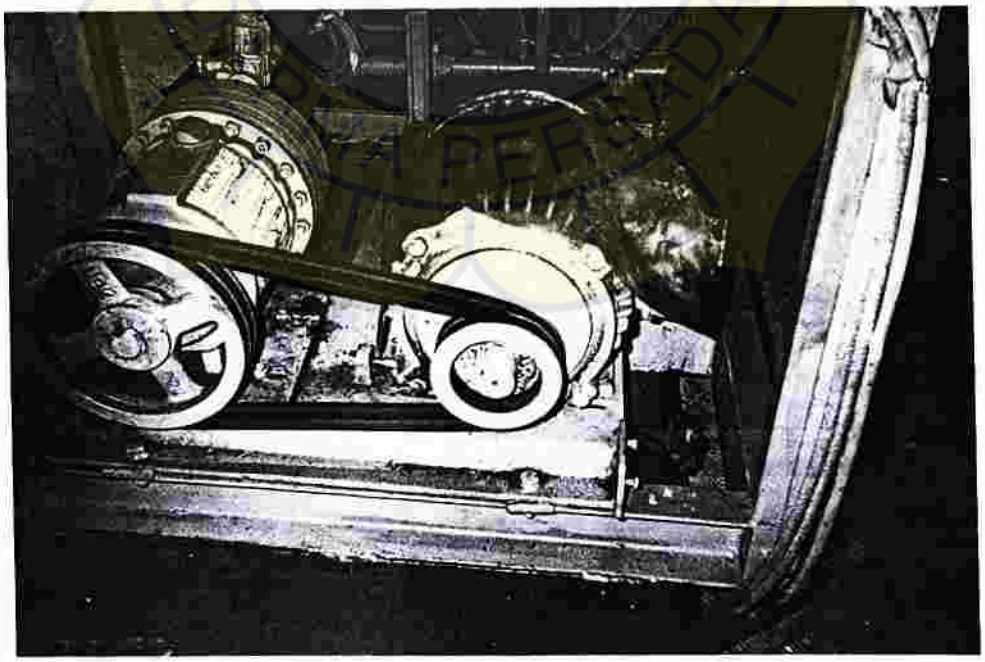

HIGH PRESSURE PUMP

ELEMEN MEMBRAN

Table 12-1 Characteristics of Selected Water Masses

	MASS	AREA OF ORIGIN	LOCATION DEPTH (METERS)	SALINITY (‰) AND TEMP. (°C) RANGE
1.	Antarctic Bottom	South Atlantic (Weddell Sea)	3,000 to bottom	34.66 (−0.4°*
2.	Antarctic Circumpolar	South Atlantic	100–4,000	34.68–34.70 0.5°
3.	Antarctic Intermediate	South Atlantic	500–1,000	33.8 2.2
4.	South Atlantic Central	South Atlantic	100–200	34.65–36.00 6°–18
5.	Arctic Deep and Bottom	North Atlantic	1,500–4,000 as Deep 1,500–Bottom as Bottom	34.90–3497 2.2°–3.5
6.	North Atlantic Intermediate	North Atlantic	500–1000	34.73 4°–8°
7.	North Atlantic Central	North Atlantic	100–500	35.10–36.70 8°–19°
8.	European Mediterranean	European Mediterranean	1,400–1,600	37.75 13°
9.	Pacific Equatorial	Central Pacific	200–1,000	34.60–35.15 8°–15°
10.	Indian Central	Indian	100–500	34.60–35.50 8°–15
11.	Red Sea	Red Sea	2,900–3,100	40.00–41.00 18°
12.	Black Sea	Black Sea	0–200	16.00 (Average) Various Temp.

* This is the only negative temperature in this table.

1203 Atlantic Ocean. In the immediate vicinity of the Antarctic Continent, particularly the Weddell Sea, waters reach extremely low temperatures in the winter. Due to this low temperature and high salinity resulting from ice formation (see Chapter 13), this water has the highest sigma *t* of any in the world ocean. As a consequence, having once gained these characteristics, it sinks and flows along the ocean floor in a direction toward the equator. In fact, traces of this water have been measured as far as 45° *North* latitude. This water mass is called *Antarctic Bottom Water*, obviously because of its location and formation area. The Antarctic Bottom water mass also flows eastward around the Antarctic Continent due to the surprisingly deep-reaching effects of the surface West Wind Drift, mixes well below the surface with masses on