

The ELV Situation in Japan and SEINAN's Method

Genkichi Ando

SEINANSHOJI CO., LTD 4-5, 5chome, Kanda, Hirosaki, Aomori, Japan

1. The Elv Situation In Japan

1.1. The situation of ELV collection and treatment

1.2. The situation of ASR treatment

1.2.1. The history of ASR treatment in Japan

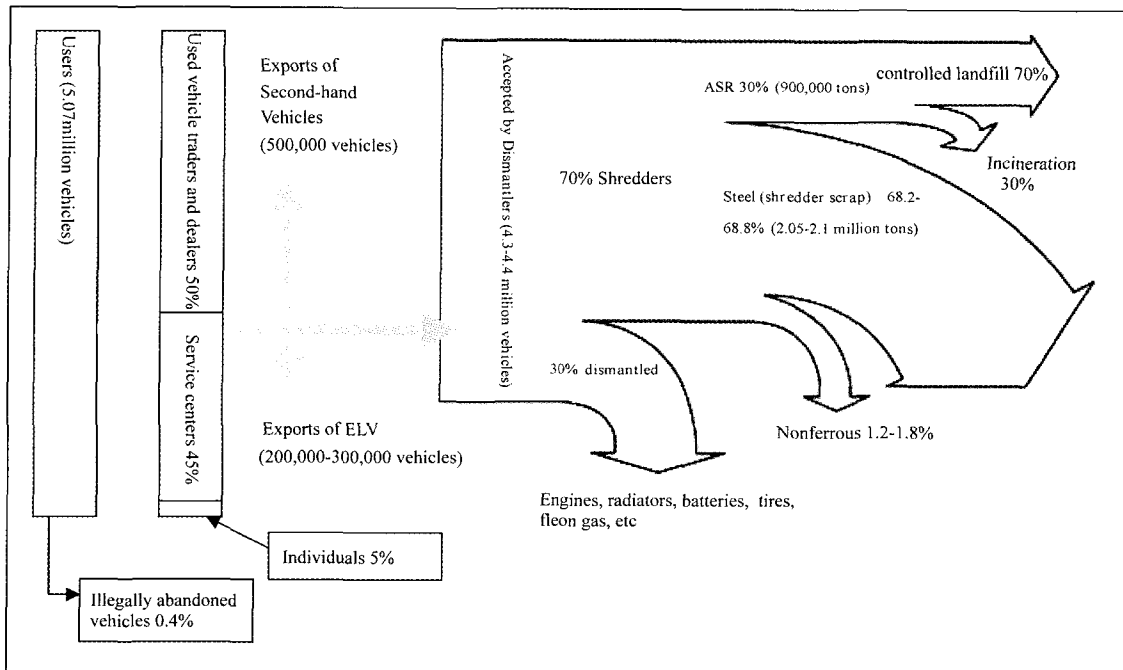
- Dumped in simple controlled landfill site.
- 1990 Teshima incident occurred.
Approximately 510,000 tons of industrial waste including ASR, which has been illegally dumped, was found at a small island located in the national park called

Teshima.

- 1996 ASR was prohibited from being dumped in simple controlled landfill site.
It has to be dumped in managed landfill with waste water treatment system and liquid interception facility.

1.2.2. Controlled landfill situation in Japan

- The remaining years (1995).
Industrial waste 3.1 years (1999 1.6 year)
ASR 1.2 year
- The number of the licenses to build new landfill
1995 137 cases
1999 26 cases



Source : Industry Structure Council, Ministry of Economy, Trade, and Industry

Fig. 1. The Situation of ELV collection and treatment.

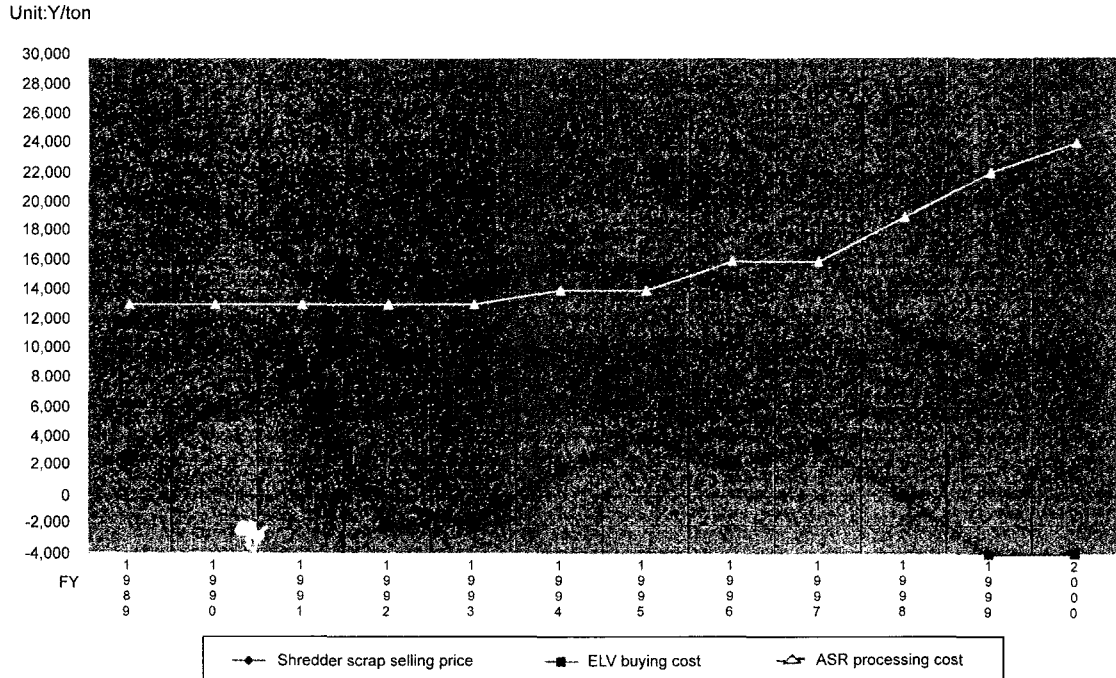


Fig. 2. Survey of Trends in the Shredder Industry (Kanto Area, 1970-Sept, 2000).

(It became obligation to investigate effects on environment around planed landfill this year.)

1.2.3. The change of Shredder business

- With viewing the change of, The selling price of steel scrap, The buying cost for ELV, The disposing cost for ASR

1.2.4. The new technology of ASR treatment, which is adopted in Japan

- Copper refining facility use ASR in substitution for coal. (Onahama smelting & refining)
- Gasification and ash-melting system Thermal decomposition drum type (Takuma, Kanemura) Fluidized bed gasification type (Ebara, Seinan)

1.3. Outline of the ELV recycle law being established soon

1.3.1. Producer is obliged to receive and dispose air bag, CFC and ASR from shredders.

(However they can commission to corporation specified by the government.)

1.3.2. Producer can charge last holder and/or owner the cost for disposing air bag, CFC and

recycling ASR

1.3.3. Recyclers, such as dismantlers or shredders, must be registered by a central government agency or regional government.

2. Seinans Method

2.1. Process flow (Material+Thermal recycle)

2.2. About Aomori RER (Fluidized-bed type gasification and ashmelting furnace)

- Outline
 - Capacity 450 tones/d [225 tones/d (150t/d : ASR+75t/d : sludge)2× lines]
 - Power generation 17,800 kw
 - Building area 3,700 m²
- Running hours (since February, 2000 until January, 2001) 5,885 hours
- Total treated tonnage (since February, 2000 until January, 2001)
 - Tones of ASR 47,194 tons
 - Tones of sludge 7,807 tons

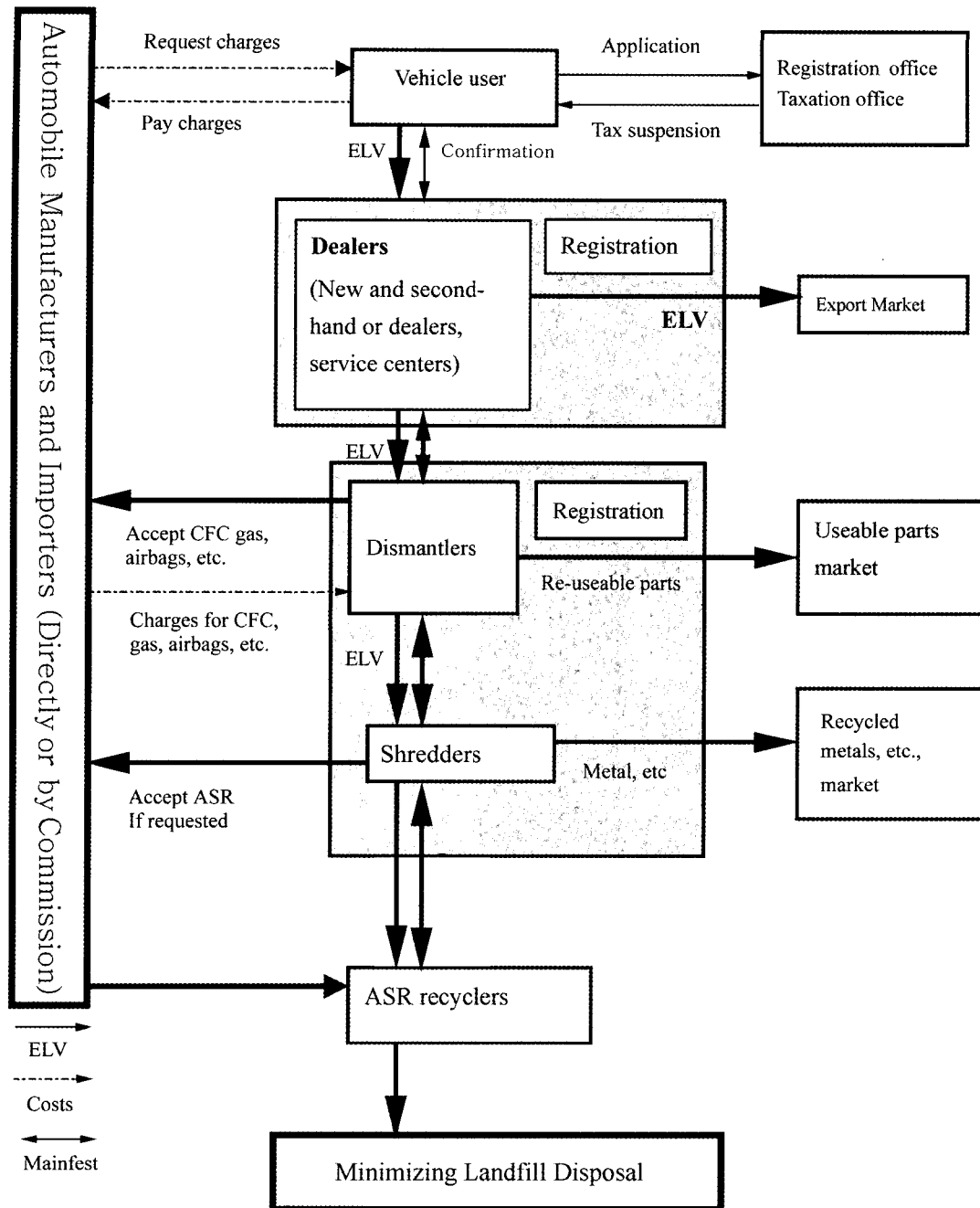


Fig. 3. ELV Recycling System Framework.

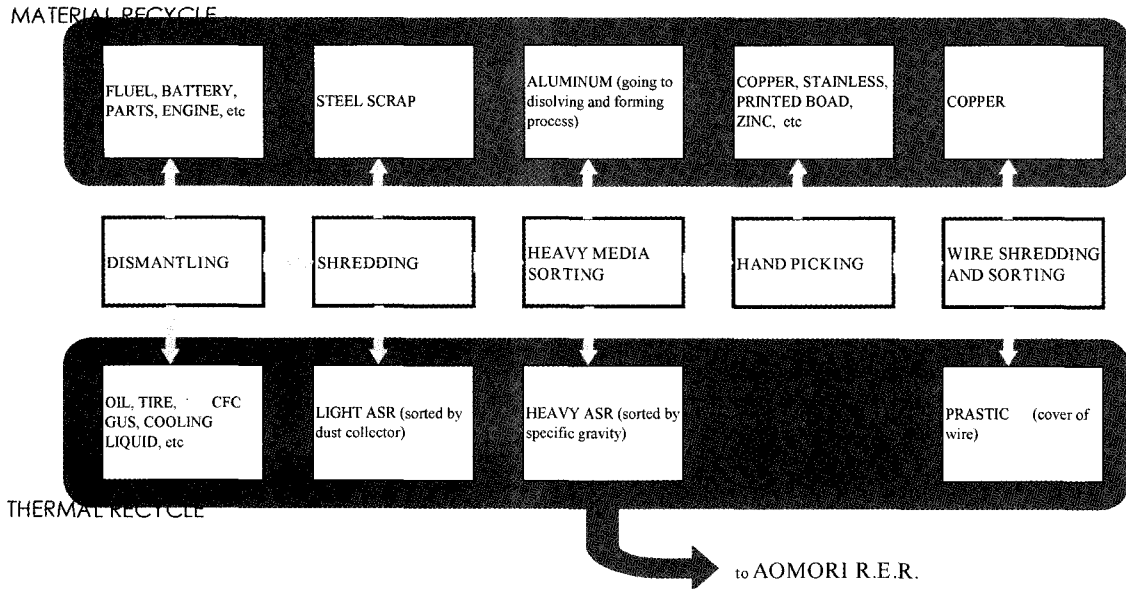


Fig. 4. Seinan's process flow.

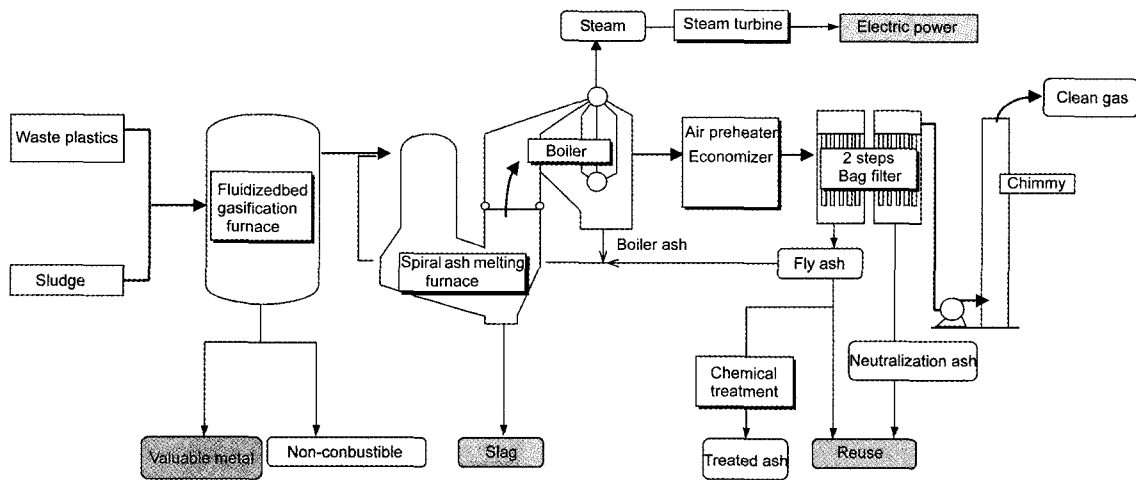


Fig. 5. Process Flow of AOMORI RER.