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APPENDICES

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APPENDIX A

Condition of ozone test:

Ozone concentration	:	50	pphm
Temperature	:	40	°C
%Elongation (static/dynamic)	:	20	%
Time	:	72	hours

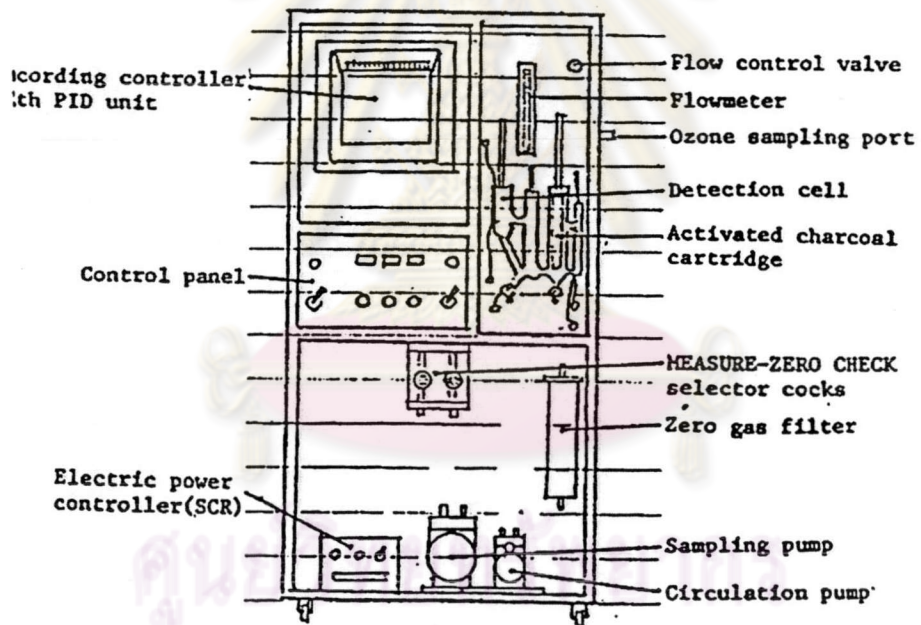


Figure A-1 Ozone automatic control recorder

Table A-1 The classification of cracking

Number of cracking	Size and depth of cracking
A: a small number of cracking	1. That which cannot be seen with the eye but can be confirmed with 10 times magnifying glass.
	2. That which can be confirmed with the naked eye.
B: a large number of cracking	3. That which is deep and comparatively long (below 1 mm).
	4. That which is deep and long (above 1 mm and below 3 mm).
C: numberless cracking	5. That which is about to crack more than 3 mm or about to sever.

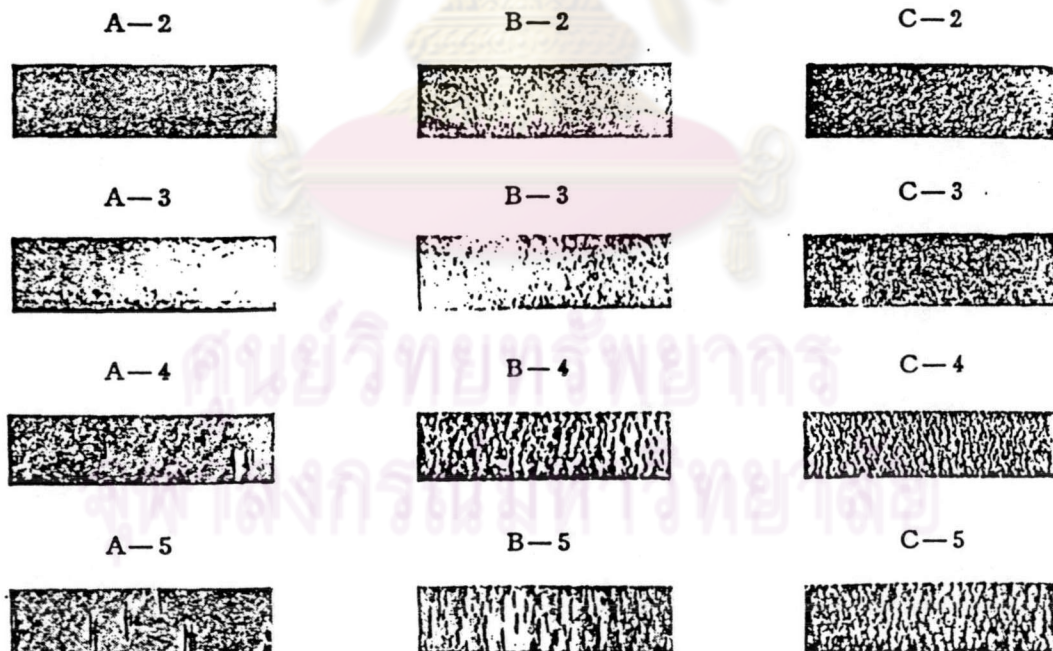


Figure A-2 Appearance of cracking

APPENDIX B

The calculation of chlorine content:

Sample: 22mg chlorinated rubber was burned in the combustion apparatus, shown in Figure 3.2, by using the method in section 3.3.2. 1ml suspension product was obtained. The amount of chloride ion, determined by using HPLC instrument, was 16.06ppm. The calculation of chlorine content was shown as follows:

$$1\text{ppm} = 1 \text{ mg/L}$$

$$16.06\text{ppm} = 16.06 \text{ mg/L}$$

$$1\text{ml the suspension product has the chlorine content} = \frac{16.06 \times 1}{1000} \text{ mg}$$

$$= 16.06 \times 10^{-3} \text{ mg}$$

$$\therefore 22\text{mg chlorinated rubber has chlorine content} = 16.06 \times 10^{-3} \text{ mg}$$

$$100\text{mg chlorinated rubber has chlorine content} = \frac{16.06 \times 10^{-3} \times 100}{22}$$

$$\text{then, the percentage of chlorine content} = 0.07\%$$

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APPENDIX C

Calculation of the change in mass of determining the chemical resistant properties:

$$\text{Change in mass, \%} = [(M_2 - M_1) / M_1] \times 100 \quad (2.9)$$

Where: M_1 = initial mass of specimens, g, and
 M_2 = mass of specimen, g, after immersion.

The verification of the combustion method:

The combustion method can be verified by calculating the efficiency, which compare the obtained chlorine content with the standard chlorine content of polychloroprene rubber.

$$\text{Efficiency, \%} = \frac{\text{Obtained chlorine content} \times 100}{\text{Standard chlorine content}} \quad (3.0)$$

$$= \frac{36.34 \times 100}{37.00}$$

$$= 98.22$$

VITAE

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