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1. J. Comyn, Ed., "Polymer Permeability", Elsevir, New York (1985).
2. R.E. Kesting, "Synthetic Polymer Membrane", 2<sup>nd</sup> Ed., McGraw-Hill, New York (1985).
3. S. H. Chen\*, S. S. Lin, D. J. Chang and, J. S. Chang "Gas transport properties of CoAlPO5/PC membranes", J. Appl. Polym. Sci., (1999) Accepted. (SCI).

4. Y. Tsujita, Membrane Science and Technology (Y. Osada and T. Nakagawo, Eds), Dekker, New York, 3-57(1992).

5. J. Kielland, J. Am. Chem. Soc. 59, 1675(1937).

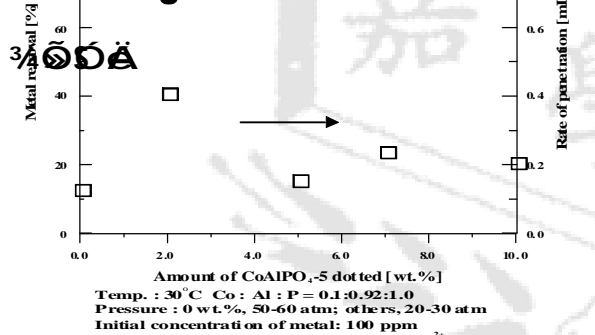


Fig.1 Effect of CoAlPO<sub>5</sub> content on Mg removal and on rate of penetration

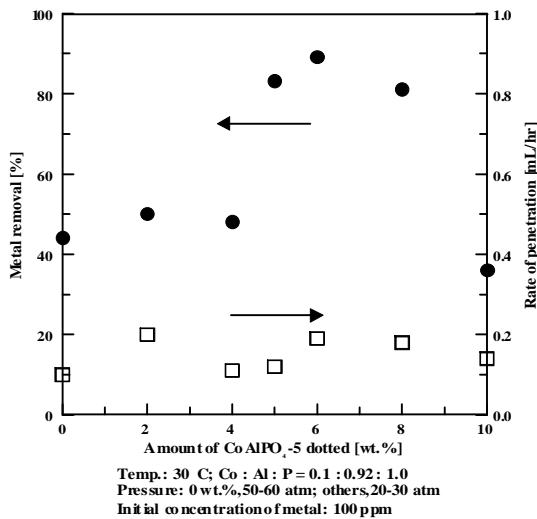


Fig.2 Effect of CoAlPO<sub>5</sub> content on Ca removal and on rate of penetration

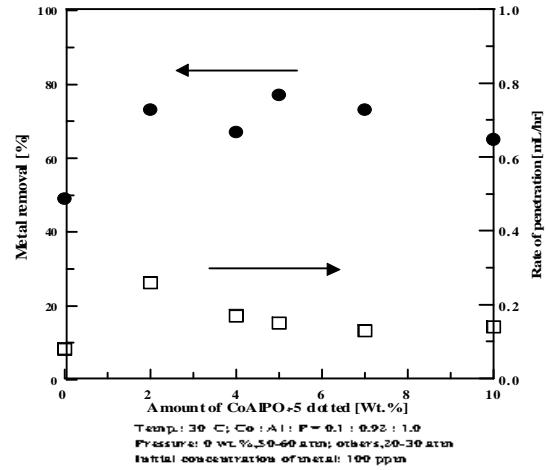


Fig.3 Effect of CoAlPO<sub>5</sub> content on Fe<sup>3+</sup> removal and on rate of penetration

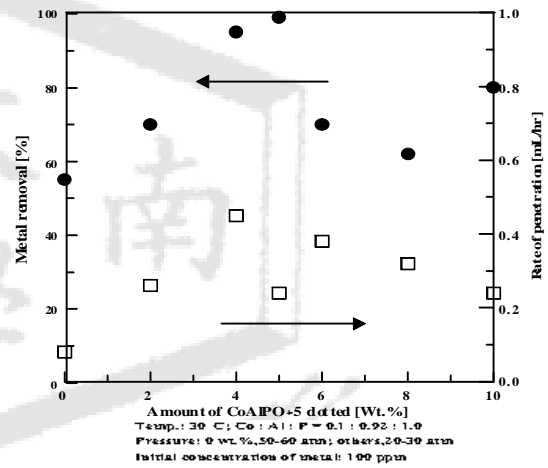


Fig.4 Effect of CoAlPO<sub>5</sub> content on Mn removal and on rate of penetration

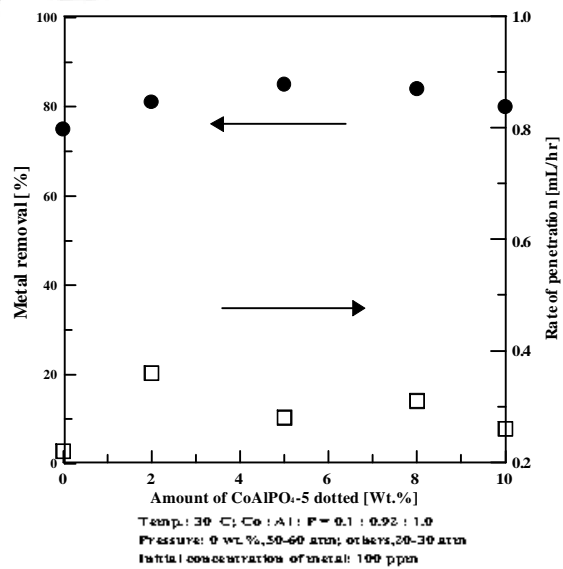


Fig.5 Effect of CoAlPO<sub>5</sub> content on Co<sup>2+</sup> removal and on rate of penetration

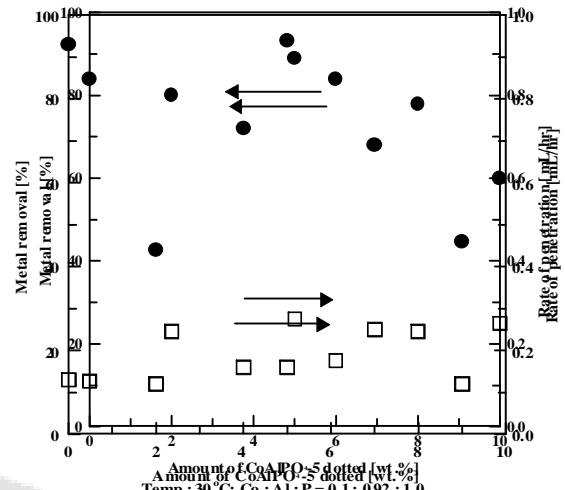


Fig. 7 Effect of CoAlPO<sub>4-5</sub> content on Fe<sup>3+</sup> removal and on rate of penetration  
 Fig. 8 Effect of CoAlPO<sub>4-5</sub> content on Al removal and on rate of penetration

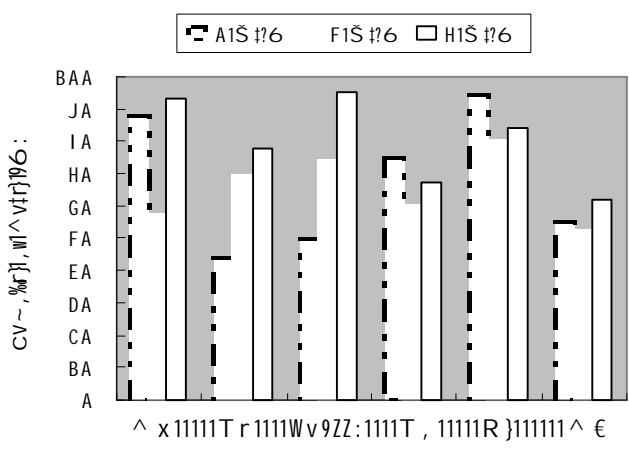


Fig. 8 Removal of metal by the CoAlPO<sub>4-5</sub> dotted membrane with the Co:A1:P = 0.08:0.93:1.00

Table 1 Relationship between removal rate and hydrated radii of metal ions

Metallic ion	Mg(II)	Ca(II)	Fe(II)	Fe(III)	Cd(II)	Mn(II)	Co(II)	Al(III)
Removal rate [%]*	JH	IJ	HH	JB	GJ	JI	IF	JE
Hydrated radius [nm]**	A?I	A?G	A?G	A?J	A?F	A?G	A?G	A?J

\* : Data of 5 wt.% CoAlPO<sub>4</sub>-5 added

\*\* : Data from reference 5.

