

OWEN EVANS

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ACMA4000

MATERIALS AND INTRODUCTION TO PROCESSING

4a. THE MATERIAL FOR THE CYLINDER MUST BE CAPABLE OF A HIGH FATIGUE LIMIT, WITH HIGH HARDNESS, TOUGHNESS AND YIELD STRENGTH. THIS IS DUE TO THE REPEATED LOADING AND UNLOADING OF PRESSURE, NOT ONLY THE INTERNAL PRESSURE OF THE OXYGEN, BUT ALSO THE COMPRESSIVE EXTERNAL PRESSURE OF THE WATER. IT MUST BE DURABLE

THE MATERIAL MUST NOT DEGRADE WHEN EXPOSED TO SALT WATER CONDITIONS AND SHOULD NOT DEGRADE WITH EXPOSURE TO UV.

THE MATERIAL MUST ALSO BE LIGHTWEIGHT SO AS NOT TO IMPEDE THE MOVEMENT OF THE USER.