ON SOME CONSIDERATIONS OF HYPERSURFACES IN CERTAIN ALMOST COMPLEX SPACES

By

Tamao NAGAI and Hidemaro KÔJYÔ

Introduction. Y. Tashiro [7][1] proved that an orientable hypersurface in an almost complex space has an almost contact structure. The purpose of the present paper is to study some properties of the induced almost contact metric structure for a hypersurface in a Kählerian space and those of the induced almost contact metric structure for a hypersurface in a K-space.

In § **1** we shall give the definition of an induced almost contact metric structure for a hypersurface in an almost Hermitian space. The condition that a hypersurface in a Kählerian space be a normal contact space is already known [7]. § **2** devoted to seek for a condition that a hypersurface in a Kählerian space be a contact metric space and a condition that a hypersurface in a Kählerian space be a normal almost contact metric space is given in § **3**. In § **4** we shall show that every hypersurface in a non-Kählerian K-space can not admit a contact metric structure. § **5** devoted to seek for a condition that a hypersurface in a K-space be a normal almost contact metric space. A property of a hypersurface admitting the second fundamental tensor with some conditions in a K-space will be discussed in § **6**.

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§ 1. An induced almost contact metric structure for a hypersurface in an almost Hermitian space. Let M^{2n+2} be a $(2n+2)$-dimensional almost Hermitian space with local coordinates x^i $(i=1,2,\cdots,2n+2)$ and we shall denote by $F^i{}_j$ and g_{ij} its almost complex structure and Hermitian metric tensor respectively. Then we have

$$(1.1) \qquad F^i{}_h F^h{}_j = -\delta^i_j\,, \qquad g_{ij}F^i{}_h F^j{}_k = g_{hk}\,.$$

By virtue of (1.1) it follows that

$$(1.2) \qquad F_{ij} = -F_{ji}\,. \qquad (F_{ij} = g_{ih}F^h{}_j)$$

Let us consider that an orientable hypersurface M^{2n+1} in the almost Her-

1) Numbers in brackets refer to the references at the end of the paper.