CLASSIFICATION OF LAVA TREE MOLDS WITH/WITHOUT REMELTED INNER SURFACE ACCORDING TO ITS FORMATION PROCESS

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Abstract

Lot of classifications of lava tree mold have been proposed by various investigators such as Ishihara (1929), Hamano (1993), Tanaka (1995) and Ogawa (1996) according to its features and structures. Makita (1997) made a table of comparison of these classifications. Recent investigation on lava tree mold of Kashiwa-bara area on the flank of Mt. Fuji performed by the group of Ogawa and Tachihara (1997) brought a lot of new discoveries and findings on the structure and formation process of lava tree mold and remelted inner surface of hollow related to lava tree mold. Tachihara (1998) is then proposing more improved classification according to their observation, however, still based on features and structures of lava tree molds.

The author would like to propose different classification concept based on its formation process, which was presented in the previous paper (1998). The complete process of lava tree mold with remelting layer formation are 1) crust formation around the tree, 2) destruction of crust by pressure of water vaporization in the tree, 3) hydrogen and carbon mono-oxide production by chemical reaction between vapor and carbonized tree, 4) and again a destruction of crust boundary with atmosphere, 5) and finally gas burning by mixing of oxygen in air, leading to remelting of surface of hollow.

Classification of tree molds types was carried out according to this process with incomplete termination or with some parasitic phenomena as shown in Fig. l.

Further, other possible effects such as lava cave formation initiated by gasification of living tree, etc., extraporated from this basic process were discussed .

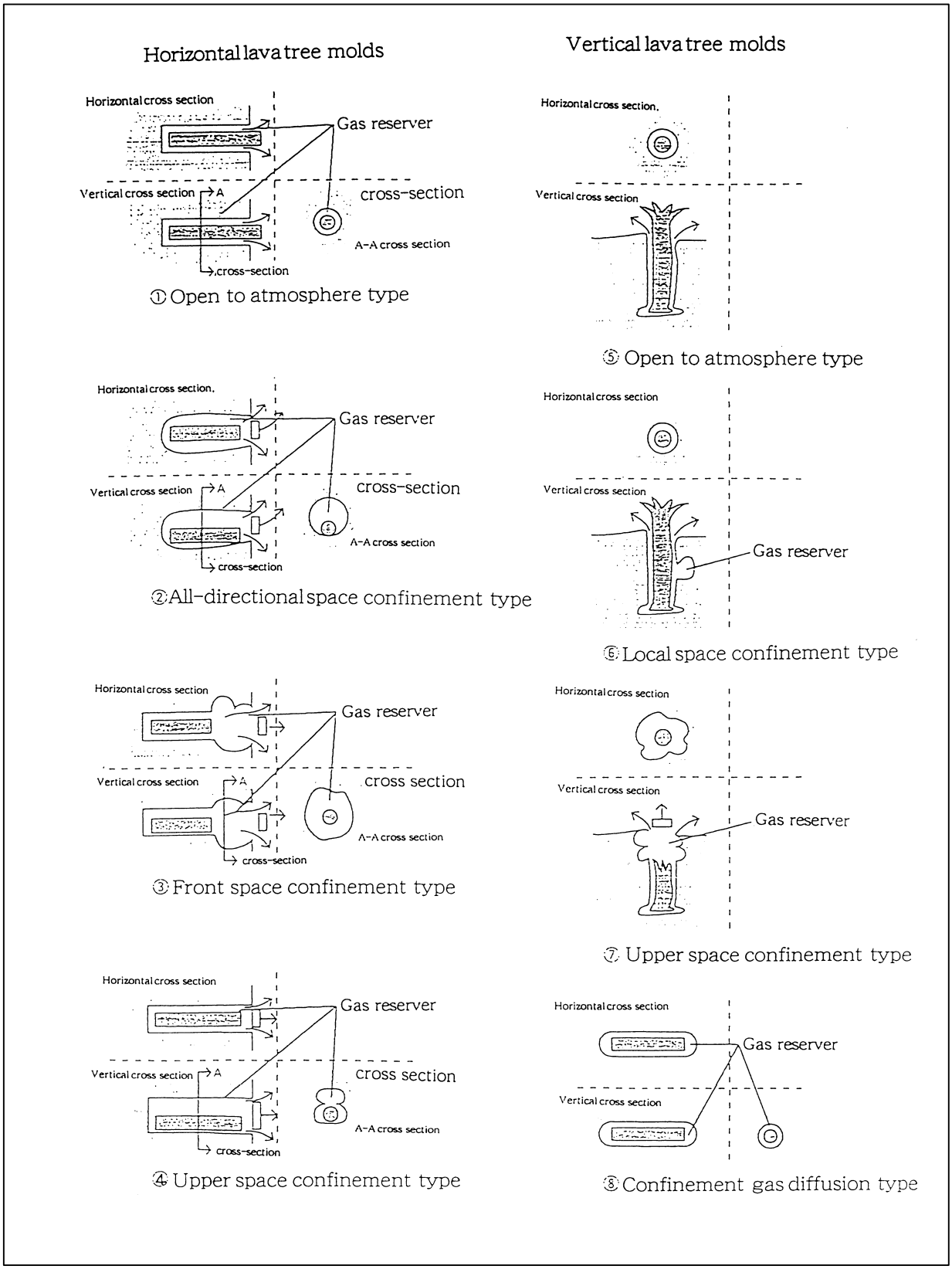

Fig. 1 - Classification of lava tree molds by its formation process.