The long time durability of seven different two layer fabric inlet stratification pipes for enhancing thermal stratification in hot water stores is investigated experimentally. Accelerated durability tests are carried out with the inlet stratification pipes both in a domestic hot water tank and in a space heating tank. Heating/cooling cycles are carried out with different operation conditions including different temperature levels and volume flow rates. The results show that that lime contained in the domestic water is deposited in the fabric pipes in the domestic hot water tank and that this destroys the capability of building up thermal stratification for the fabric inlet stratification pipe. The results also show that although dirt, algae etc. are deposited in the fabric pipes in the space heating tank, the capability of the fabric inlet stratifiers to build up thermal stratification is unchanged for five out of seven fabric pipes within the test period.