We investigate the ramification group filtration of Galois extension of function fields, if the Galois group satisfies a certain intersection property. Such a property holds for all finite groups if every Sylow $p$-subgroup of them is elementary abelian. Note that such groups could be non-abelian. We show how the problem can be reduced to the totally wild ramified case on an $p$-extension. Our methodology is based on an intimate relationship between the ramification groups of the field extension and the ones of all degree $p$ sub-extensions. Not only do we confirm the Hasse-Arf property holds in this setting, we also prove that the Hasse-Arf divisibility result is the best possible by explicit calculations of the divisors, which are expressed in terms of the different exponents of all those degree $p$ sub-extensions.

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