It was well known that only electrons within Gamma factor are capable of initiating fusion reaction, and the trend today is to increase heating power to get as much electrons above threshold energy as possible. However, increasing heating power does not necessarily increase heating efficiency, often a saturation value exists, and the efficiency may decline after that. Since the fusion energy release per reaction is fixed, the total energy gain, Q value, will inevitably approach 1. Therefore, to increase Q value, the heating efficiency has to be increased, and there is an optimum achievable Q value associated with each heating efficiency, which is lower than general expectation resulted from fission reaction.

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