Embrittlement

- **Loss of ductility due to helium collecting at grain boundaries.**

- **Try to keep the uniform elongation > 1%**

- **In ferritic steels, the shift in the ductile to brittle transition temperature is the important thing.**

(Figures)

Overall Conclusions

- **In DT devices , displacement and transmutation effects will limit useful lifetimes to a few full power years. Hence replacement of the FW, blanket, components will have to be done on a regularly scheduled basis.**

- **Use of advanced fuels will drop the neutron wall loading by a factor of ≈ 30 which means that the structural materials can last for the life of the reactor.**