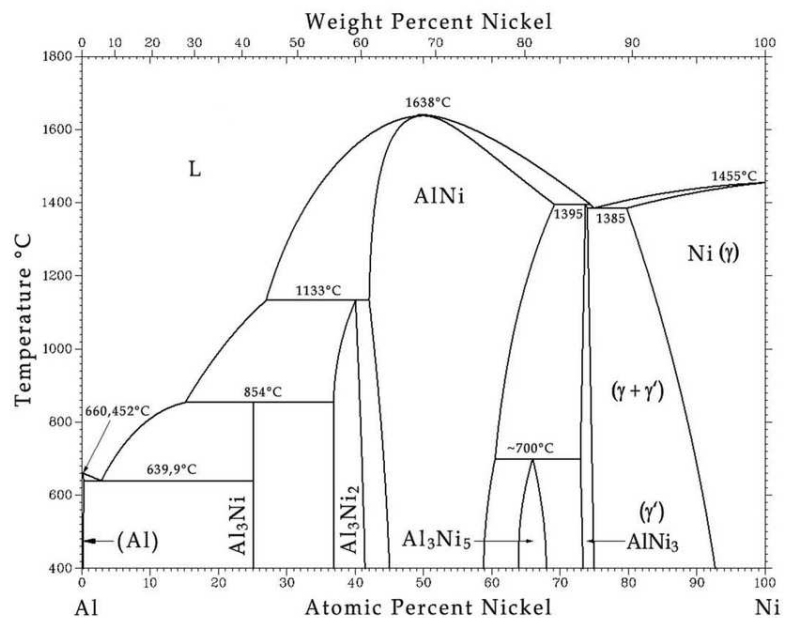


Assignment - II

1. Show a eutectic binary phase diagram and mention different phases in it. Show Free energy vs composition diagram for three temperatures (i) just above eutectic point (ii) at eutectic point and (iii) just below eutectic point. [8]
2. Show free energy-vs composition diagram at a temperature just above monotectic point in a monotectic transformation. [6]
3. Construct a peritectic transformation diagram in A-B binary system. Show G-x diagram for a temperature just below peritectic temperature. [5]
4. If A-B-C ternary system makes a ternary eutectic at A-25%B-25%C (At%), show the transformation in a ternary diagram. Show how you can transform the diagram into 2-D figure with the eutectic composition and binary liquidus tie lines. [10]
5. Observe the following phase diagram for the following transformations, if you find one or more, mention with Atomic percent of nickel and temperature. [7]

- (i) Eutectic
- (ii) Metatectic
- (iii) Eutectoid
- (iv) Monotectic
- (v) Peritectic
- (vi) Syntectic
- (vii) Congruent melting



Assignment - II

6. Draw a neat sketch like the following phase diagram and explain the errors in it. Then construct the corrected one. [10+4]

