



Title : Manufacture of Styrene Butadiene Rubber (SBR)

Due Date : 8<sup>th</sup> April 2013

Instructions :

Students can work two in a group and one assignment can be submitted

The information to be furnished

1. List the raw material required for the production
2. Identify and write down the various methods of production
3. Develop a block diagram for the from raw material to product
4. Draw the Process Flow Diagram (PFD) from the block diagram using equipment symbols
5. Identify and list the upstream process and down stream processes
6. List the unit operations and unit processes
7. Describe the manufacturing process in tabular column format as discussed in the classroom lecture
8. Write down the applications of SBR.
9. Identify and name any four industries which manufactures SBR and also mention their locations in India

References:

- Gopala Rao, Marshall Sitting, *Dryden's Outlines of Chemical Technology - for the 21<sup>st</sup> Century*, East-West Press, 3<sup>rd</sup> Ed., (2004)
- George T Austin, *Shreve's Chemical Process Industries*, Mc Graw Hill, 5<sup>th</sup> Ed., (1945)
- World Wide Web

**Note:**

- Please note do not use the record sheet provided by the department
- Use of A4 sheet is recommended
- Do not use free hand drawing. Use proper scale and pencil to draw the process flow diagram
- Expected to submit the assignment on due date. Late submission will not be entertained.