

The Alchemy of Air by Thomas Hager

Questions for Book: Answer the questions and resubmit this document to your instructor with the subject line: Alchemy of Air - your name - Ch. 10 - Ch. 12. Please save this document as AA_05 _your_name

Chapter Ten

1. What does it mean to poison a catalyst?
2. How is nitrogen separated from oxygen using liquid air?
3. What dangerous gas was produced in the water-gas process?
4. How tall were the first ovens built from steel cylinders?
5. How many days did the first larger ammonia producing machine work?
6. What brittle substance is produced with hot iron reacts with nitrogen?
7. What is a Bosch hole and what problem did it solve?
8. In 1911 how much ammonia was the Bosch prototype producing?

Chapter Eleven

1. What is the Kaiser Wilhelm Institute?
2. Where was the first plant built?
3. The first plant had housing and transportation for about how many workers?
4. The first plant was not just an ammonia factory - it was the birth of an entirely new technology? What does this mean?
5. Who did Nernst and Planck lure back to Berlin?

Chapter Twelve

1. What was the easiest fertilizer to make from ammonia?
2. What role did Haber take in WWI and why?
3. List some nitrogen containing explosives.
4. "The side that won the war would be the side with the greatest access to ...". What?
5. What did Bosch promise to do at his plant to aid the war effort? What role did Haber play?
6. Who was Speer? What role did he play in this drama?
7. What was Leuna?



Installation of high-pressure reactor in the ammonia plant