

Five students hurt in ESB explosions



INVESTIGATION BEGINS — Professor Stanley E. Zager explains to YSU police officer
Nick Ross, why he thinks the heat exchanger exploded yesterday. (Photo by Bill Oberman)

by George Denney

Five YSU students were injured yesterday in two separate explosions in the Engineering & Science Building basement. YSU security and safety forces are currently investigating the causes of the incidents which occurred three hours apart.

All five of the students have been released from the hospital.

Alan Morella and Kevin Noble, juniors, chemical engineering, received cuts and burns from flying glass and steam in an explosion of a heat exchanger at 10:40 a.m.

Charles Slabe, Robert Berardino and Oba Vincent, also juniors in chemical engineering, were injured by flying metal in an explosion of an oxygen calorimeter at 2 p.m.

Both accidents happened during two regular classroom experiments in Room 23. The experiments were not related. All five students were taken by ambulance to St. Elizabeth Hospital.

Noble was treated for lacerations of the left forearm and first degree burns of the chest.

Morella was treated for lacerations of the forehead and right hand and first-degree burns of the right arm and knee.

Slabe and Vincent were treated for minor lacerations. Berardino was admitted in satisfactory condition with contusions of the abdomen.

The first explosion, injuring Morella and Noble, occurred while they were working with a heat transfer unit called a thermal convection, vertical and horizontal heat exchanger.

According to Dr. Stanley E.

Zager, chemical engineering, the unit creates steam from a separate supply of water. He first speculated that the "rate of flow of the water supply decreased, allowing steam to collect in the water lines, causing the explosion."

The explosion occurred at a point in the water line where a pyrex glass gauge, called a rotameter, is located. The rotameter is approximately two feet long and two inches in diameter.

Morella said that he and Noble were "adhering to the manual" during the experiment and do not know what caused the explosion. After the second explosion, Zager said that there "may have been a defect in the glass rotameter."

Zager also attributes defective parts as the cause of the second explosion. Berardino, Vincent and Slabe were working with an oxygen calorimeter. The calorimeter is made of thick metal construction and is "supposed to withstand a pressure of at least fifty atmospheres," according to Zager.

The unit measures the heat of combustion of organic compounds and Zager said, "The experiment had required a pressure of only ten to fifteen atmospheres."

The calorimeter had "just been sent out for repair," Zager said, "and the unit should have been pressure tested."

Director of Security Dick Turkiewicz said that "YSU security would be investigating the explosion in conjunction with Safety Coordinator Phil Hirsch in order to find the cause and prevent something of this nature in the future."