

Physics Department Incidents Log

Incident No. 2003-06 Date of Report: 3/04/04
Reportable/Classification: No/ Minor Incident Date of incident: 5/9/03
Status ES&H Committee Final Report
Groups Involved: ATF
Lead Investigator: Igor Pogorelsky

Description:

On the afternoon May 9, 2003, the ATF mechanical/laser technician approached me with a complaint on the back pain. The origin of the pain was traced to the job he did in the morning – mounting 10” CF vacuum flanges in the electron beamline in preparation for a user’s experiment. The next day he visited the BNL Occupation Clinic and the Accident/Incident Investigation/Report has been filed. The next several days he had a sore feeling in his back and had been confined primarily to the desk jobs. No working days have been missed. By the end of the week he felt better and returned to his regular job functions.

The total weight of the 10” CF flange with feed-throughs, manipulators and other accessories mounted on top of it, is ~40 lbs. It is located on the top of the beamline that lies on top of an enclosed laser table. The area is space restricted due to the confines of the enclosure, which prohibits the use of lifting tools or proper people positioning to equalize their load share during the flange mounting.

This job is a two-person job, which requires both to properly share the weight of the flange.

Root Cause:

A3 – Human Performance Less Than Adequate

B2 – Rule Based Error

C02 – Signs to stop were ignored and step performed incorrectly

C03 – Too much activity was occurring and error made in problem solving

This load does not exceed the technician’s physical capabilities and he is doing this or similar job on a regular basis with the help/assistance of other ATF personnel or one of the users. In this case, the sharing of the load was not properly planned and executed.

Contributing Causes:

A1 – Design / Engineering Problem

B5 – Operability of Design / Environment Less than Adequate

C02 – Physical environment Less than Adequate

A4 - Management Problem

B4 – Supervisory Methods Less than Adequate

C02 – Progress/Status of task not adequately tracked

Corrective Actions (Group):

1. An opening in the roof of the optical table above the flange location has been made to facilitate its lifting and repositioning.
2. The technician has been instructed to avoid awkward body position while lifting the weight and to share it with others.
3. The supervisor will participate in the next operation of the flange mounting in order to understand if any additional preventive engineering measures can be applied to reduce a risk of injury.

Corrective Actions (Department):

1. Group Safety Coordinators (GSC) will be informed and there will be discussion of this incident at the next GSC meeting, Group Leaders will be briefed, and the Department will be informed of the incident at the next Department Meeting.

Lessons Learned:

A personal lesson is that everybody needs to understand his physical restrictions and act accordingly in order to prevent an injury. Personal initiative to take charge of a physical task that has been done many times without incident is instinctual and often comes into play before the reflective procedure required for considering safety. Proper work planning gives one the time to think through the task and apply a safety analysis before the task is done.

The above incident has been investigated and requires no further action.

S. Aronson, Department Chair

Date

S. M. Shapiro, ES&H Committee Chair

Date