we were able to locate defects in design.

We had two conferences with the manufacturer's representatives and pointed out the designing defects. They didn't know anything about dangerous exposure. They were talking in terms of silica and the problem was concerned with lead.

At Brakeblok, we were able to demonstrate to the unions that the exhaust system was well designed and was affording excellent protection against the various toxic materials used.

The men applying for insurance from the Prudential Insurance Company were assessed an extra premium because they worked in a supposedly hazardous plant. Dr. Hamlin and I met with the union stewards and explained the medical and industrial hygiene control program and pointed out the facts about lead poisoning and asbestosis.

The stewards felt that if the plant were safe we ought to be able to get their insurance premiums reduced. On the basis of our survey findings, we were able to demonstrate to the insurance company that the hazards were controlled and reduction in premium was immediately obtained.

A humerous incident occurred while we were meeting with the union stewards. I left the electrostatic precipitator at the asbestos weigh station in order to collect an air sample during the conference in order to save time. When I returned, the collector was full of asbestos. Someone had thrown a handful of the material into the tube to make sure I would find the place very dusty. I wouldn't have had that much dust if I left the sampler running for a year. Our medical director has just outlined the importance of the engineers' thinking in terms of health as well as production and cost. Dust and fume control constitute an important part of the correlation of medical and chest x-ray findings with exposure.

Before placement of an employee, Dr. Hamlin consults with me about exposure, and he makes use of our dust findings as an aid in the interpretation of chest films.

This leads to an important point. The test of whether you have well designed a hood or exhaust system is whether you have protected the man. All your mathematics and ventilation guides will not give you the absolute answer. You may design according to good engineering practice, but the proof of a good job depends on whether it will pass a field test. Here we can help. For example: A wheelabrator is designed well enough for silica dusts but it is poorly designed for lead bearing dusts. The nature of the material you are exhausting is important.

The original designer thinks in terms of visible dust without consideration for the dust that cannot be seen with the eye. This demonstrates the need for the industrial hygienist's assistance. A system that is satisfactory for coal dust may be totally ineffective for mercury vapor.

Recently the Amsco Division became interested in buying a Do-All Saw for cutting manganese steel gates and fins. Before placing the order, they asked our department to test this machine for any dust and fume hazard while it was cutting some test castings. That's good common sense! You wouldn't think of buying the machine unless it could solve your production problem.