

Vacuum brush

The vacuum brush shown in Fig. 2 consisted of a circular nylon bristle brush mounted on an angled handle and fitted via the handle to the same vacuum cleaner. In use, the brush was used to remove dust from drums and assemblies under vacuum.

EXPERIMENTAL PROCEDURE

In order to determine which of these two methods was the better, the performance of each was compared with the traditional blow-off method, in two separate experiments shown in Table 1.

TABLE 1. EFFECT OF CLEANING METHODS ON DUST CONCENTRATIONS

Hour		1	2	5	6	6
Activity		Back-ground	Blow-off	Back-ground	Funnel cleaning	Brush cleaning
Personal sampler	particles/cm ³	116	422	107	415	
	fibres/cm ³	0.96	5.35	0.95	3.5	
Static sampler	particles/cm ³	161	72	162	210	
	fibres/cm ³	0.45	0.52	0.41	0.75	
Peak sample	particles/cm ³		41750		759	
	fibres/cm ³		87		1.04	
Personal sampler	particles/cm ³	125	635	140		158
	fibres/cm ³	0.16	0.84	0.09		0.22
Static sampler	particles/cm ³	129	155	110		122
	fibres/cm ³	0.10	0.16	0.20		0.18
Peak sample	particles/cm ³		41750			310
	fibres/cm ³		87			0.57

During the first hour of the day air samples were collected to determine background concentrations; during this period the near side front road wheel was removed. In the second hour samples were collected during dust removal from the near side brake assembly by blow-off. Further background samples were taken during the fifth hour while the off side front road wheel was removed, and during the sixth hour dust determinations were made while either the funnel or the brush cleaning methods were used.

The personal samples were collected from the breathing zones of mechanics engaged in the work and static samples were collected concurrently to simulate exposure of mechanics working in an adjacent repair bay. Short duration samples were also collected by means of a Dräger pump from the operator's breathing zone at the peak period of dust generation.

All the samples were subsequently analysed for fibres in accordance with the technique laid down in the *Hygiene Standard for Chrysotile Asbestos* published by the British Occupational Hygiene Society (1968). Particle counts were limited to particles greater than 1 μ dia.