LIST OF RESPIRATORY PROTECTIVE DEVICES APPROVED BY THE BUREAU OF MINES

BY S. J. PEARCE AND L. B. BERGER

* * * * * * * * * * Information Circular 7636

UNITED STATES DEPARTMENT OF THE INTERIOR
Oscar L. Chapman, Secretary
BUREAU OF MINES
J. J. Forbes, Director

Work on manuscript completed June 1952. The Bureau of Mines will welcome reprinting of this paper, provided the following footnote acknowledgment is made: "Reprinted from Bureau of Mines Information Circular 7636."

June 1952

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/1

LIST OF RESPIRATORY PROTECTIVE DEVICES APPROVED BY THE BUREAU OF MINES

by

S. J. Pearce[1/] and L. B. Berger[2/]

CONTENTS

	Page
Introduction	1
List of approved devices, June 1, 1952	2
Self-contained breathing apparatus approved under Schedules 13, 13A, 13B, and 13C	2
Gas masks approved under Schedules 14, 14A, 14B, 14D, and 14E	3
Type A: Acid-gas masks	3
Type B: Organic-vapor masks	4
Type BE: Organic-vapor, toxic-dust, fume, mist, and fog masks	4
Type AB: Acid-gas and organic-vapor masks	4
Type ABE: Acid-gas, organic-vapor, toxic-dust, fume, mist, and fog masks	5
Type C: Ammonia-gas masks	5
Type D: Carbon monoxide-gas masks	6
Type N: Universal gas masks	6
Supplied-air respirators approved under Schedules 19, 19A, and the amendment to Schedule 19A	7
Type A: Hose masks	7
Type B: Special hose masks without blowers	8
Type C: Air-line respirators	8
Type CE: Abrasive-blasting helmets, hoods, or masks.	8
Dispersoid (dust, fume, and mist) respirators approved under Schedule 21	9
Pneumoconiosis-producing and nuisance-dust respirators	10
Toxic-dust respirators	12
Dust respirators	12
Fume respirators	14
Mist respirators	15
Nonemergency gas respirators (chemical cartridge respirators) approved under Schedule 23	15
Type B: Organic vapor respirators	15
Type BE: Dispersoid and organic-vapor respirators	15
Approval labels	15
Names and addresses of companies to which approvals have been granted	16

1/ Chemist in charge, Respirator Section, Health Branch, Bureau of Mines, Pittsburgh, Pa.
2/ Chief, Health Branch, Bureau of Mines, Pittsburgh, Pa.

Information Circular 7636

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/2

ILLUSTRATIONS

Fig.		Follows page
1.	Self-contained breathing apparatus	2
2.	Self-contained breathing apparatus	2
3.	Self-contained breathing apparatus	2
4.	Typical approved gas masks	6
5.	Type A supplied-air respirators	6
6.	Type B supplied-air respirators	8
7.	Type C continuous-flow class supplied-air respirators	8
8.	Type C demand-class supplied-air respirators	8
9.	Type CE supplied-air respirators	8
10.	Type CE supplied-air respirators	8
11.	Dispersoid respirators. Pneumoconiosis-producing and nuisance-dust respirators	14
12.	Dispersoid respirators. Pneumoconiosis-producing and nuisance-dust respirators	14
13.	Dispersoid respirators. Dust respirators	14
14.	Dispersoid respirators. Dust respirators and toxic-dust respirators	14
15.	Dispersoid respirators. Fume respirators and mist respirators	14
16.	Nonemergency gas respirators (chemical-cartridge respirators) for organic vapors	14

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Information...
ACL Doc 25218 · Page 3 of 35
Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/3

INTRODUCTION

One phase of the work of the Bureau of Mines in health and safety is promotion of the use of safe, satisfactory, and reliable respiratory-protective devices. To insure that such devices will be available, the Bureau has established schedules of minimum requirements for self-contained breathing apparatus,3/ gas masks,4/ supplied-air respirators (hose masks, air-line respirators, and abrasive-blasting helmets, hoods, or masks),5/ dispersoid (dust, fume, and mist) respirators,6/ and nonemergency gas respirators (chemical-cartridge respirators).7/ Approval tests of self-contained breathing apparatus are conducted under the supervision of mining engineers of the Accident Prevention and Health Division, Region VIII; approval tests of other types of respiratory-protective devices are conducted by the Health Branch.

3/ Bureau of Mines, Procedure for Establishing a List of Permissible Self-contained Mine Rescue Breathing Apparatus. Fees, Character of Tests, and Conditions Under Which Mine Rescue Breathing Apparatus Will be Tested: Sched. 13, March 5, 1919, 13 pp.; Sched. 13A (rev. of Sched. 13), January 21, 1930, 12 pp.; Sched. 13B (rev of Sched. 13A), August 12, 1935, 12 pp.; Sched. 13C (rev. of Sched. 13B), July 9, 1946, 11 pp. (Code of Federal Regulations reference: 30 CFR Part 11.)

4/ Bureau of Mines, Procedure for Establishing a List of Permissible Gas Masks, Fees, Character of Tests, and Conditions Under Which Gas Masks Will be Tested: Sched. 14, May 22, 1919, 13 pp.; Suppl. to Sched. 14, January 6, 1920, 4 pp.; Sched. 14A (rev. of Sched. 14), August 25, 1923, 15 pp.; Sched. 14B (rev. of Sched. 14A), August 7, 1930, 13 pp.; Sched. 14C (rev. of Sched. 14B), August 20, 1934, 17 pp.; Sched. 14D (rev. of Sched. 14C), May 9, 1935, 17 pp.; Sched. 14E (rev. of Sched. 14D), December 24, 1941, 19 pp. (Code of Federal Regulations reference: 30 CFR Part 13.)

5/ Bureau of Mines, Procedure for Testing Hose Masks for Permissibility: Sched. 19, April 28, 1927, 8 pp.; Suppl. to Sched. 19, August 20, 1934, 3 pp. Procedure for Testing Supplied-Air Respirators for Permissibility: Sched. 19A (rev. of Sched. 19 and suppl., enlarged to include special hose masks without blowers, air-line respirators, and abrasive blasting helmets, hoods, or masks), August 9, 1937, 21 pp.; Sched. 19A as amended in the Federal Register on March 13, 1948, to include Type C, demand-class supplied-air respirators. (Code of Federal Regulations reference: 30 CFR Part 12.)

6/ Bureau of Mines, Procedure for Testing Filter-type Dust, Fume, and Mist Respirators for Permissibility: Sched. 21, August 20, 1934, 14 pp. (Code of Federal Regulations reference: 30 CFR Part 14.)

7/ Bureau of Mines, Procedure for Testing Nonemergency Gas Respirators (Chemical Cartridge Respirators) for Permissibility: Sched. 23, November 13, 1944, 10 pp. (Code of Federal Regulations reference: 30 CFR Part 14A.)

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Information...
Published by AsbestosClaims.Law
ACL Doc 25218 · Page 4 of 35
asbestosclaims.law/library/25218/4

Manufacturers of respiratory-protective devices may submit their equipment to the Bureau of Mines for approval under the requirements of these Schedules. As a prerequisite to testing, the Bureau requires statements to the effect that: (1) The device is completely developed and of design and materials the manufacturer believes suitable for a finished marketable device; and (2) the device has been subjected to such inspections and tests as are described in the schedules and met those requirements when tested by the manufacturer or his testing agency. It also requires (3) a statement regarding the nature, adequacy, and continuity of control of the quality of the respirator. If the manufacturer can satisfy these requirements and if the device, when tested by the Bureau, meets its requirements, a certificate of approval will be granted, which not only states that the equipment has passed the Schedule of Requirements but also gives information about its limitations. If it is found at any time that approved devices purchased in the open market and tested do not meet the requirements of the Schedule, the Bureau may rescind approval.

Lists of approved devices are published periodically for the information of the public. The last list published[8/] included all devices approved to June 1, 1950.

LIST OF APPROVED DEVICES, JUNE 1, 1952

Following is a list of all respiratory-protective devices that had obtained official certification of approval from the Bureau of Mines on June 1, 1952. Devices marked "(Inactive)" are no longer being manufactured, but retain their Bureau of Mines approval status. The manufacturers of this equipment have met the requirements; and the devices have passed the tests for safety, practicability, and efficiency required when approval was granted. The detailed requirements are described in the schedules cited. Photographs of approved devices are included. The addresses of the manufacturers of approved devices are listed alphabetically at the end of this circular.

Self-Contained Breathing Apparatus Approved Under Schedules 13, 13A, 13B, and 13C

1. Gibbs oxygen breathing apparatus. Approval BM-1300, issued to Mine Safety Appliances Co., January 15, 1920. (Inactive)

2. Paul oxygen breathing apparatus. Approval BM-1301, originally issued to American Atmos Corp., January 15, 1920; later transferred to Mine Safety Appliances Co. (Inactive)

3. Fleuss-Davis Proto oxygen breathing apparatus. Approval BM-1302, issued to Siebe, Gorman & Co. (Ltd.), February 7, 1924. (Inactive)

4. McCaa oxygen breathing apparatus. Approval BM-1303, issued to Mine Safety Appliances Co., August 31, 1925.

5. Draeger oxygen breathing apparatus (1924 type). Approval BM-1304, issued to Draegerwerk, August 1, 1929. (Inactive)

6. McCaa 1/2-hour oxygen breathing apparatus. Approval BM-1305, issued to Mine Safety Appliances Co., April 1, 1931. (Inactive)

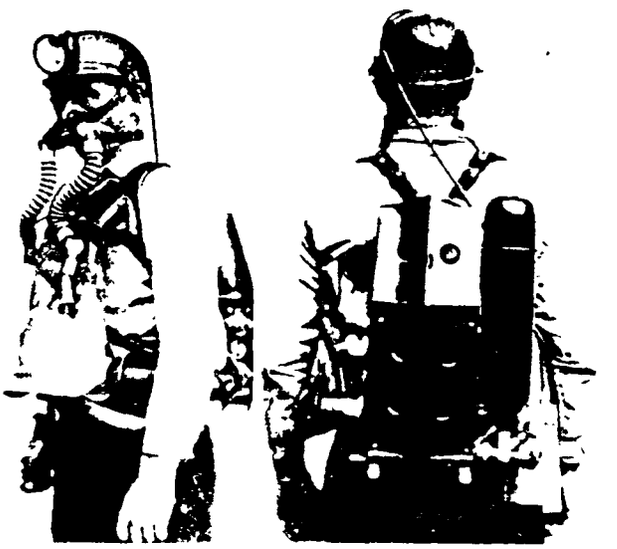
7. McCaa 1-hour oxygen breathing apparatus. Approval BM-1306, issued to Mine Safety Appliances Co., July 28, 1937.

8/ Pearce, S. J., and Berger, L. B., List of Respiratory Protective Devices Approved by the Bureau of Mines: Bureau of Mines Inf. Circ. 7570, 1950, 16 pp.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Information... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 5 of 35 asbestosclaims.law/library/25218/5



Gibbs 2-Hour Apparatus
(front and back views),
BM-1300



Paul 2-Hour Apparatus
(front and back views),
BM-1301



Fleuss-Davis 2-Hour Apparatus
(front and back views),
BM-1302



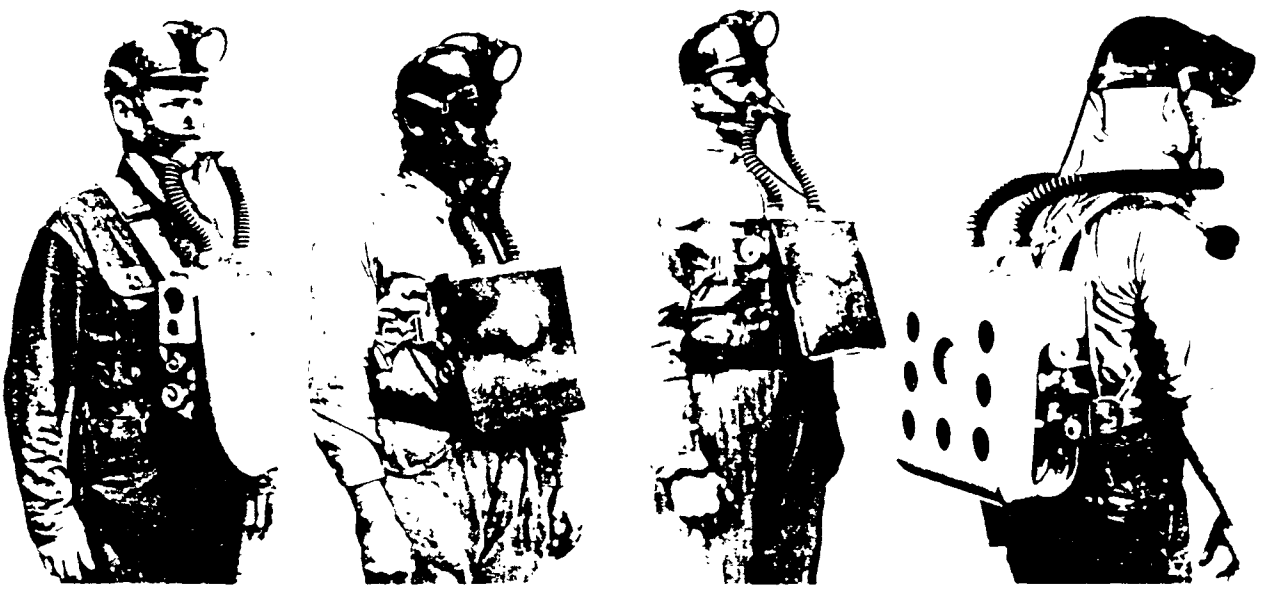
McCaa 2-Hour Apparatus
(front and back views),
BM-1303

Figure 1. · Self-contained breathing apparatus.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/6



Draeger (1924) 2-Hour Apparatus (with side tubes and shoulder tubes), BM-1304



McCaa One-Half-Hour Apparatus BM-1305

M. S. A.

M.S.A. 1-Hour Apparatus (front and back types), BM-1306

Figure 2. - Self-contained breathing apparatus.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/7



M. S. A. Chemox Oxygen Breathing Apparatus, BM-1307



Scott Air-Pak Self-Contained Breathing Apparatus, BM-1308



M. S. A. Demand-Type Oxygen Apparatus, BM-1309



M. S. A. Demand-Type Air Apparatus, BM-1310

Figure 3. - Self-contained breathing apparatus.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/8

8. Chemox oxygen breathing apparatus (3/4-hour self-contained oxygen-generating breathing apparatus). Approval BM-1307, issued to Mine Safety Appliances Co., October 3, 1946.

9. Scott Air-Pak self-contained breathing apparatus (1/2-hour self-contained compressed-air breathing apparatus). Approval BM-1308, issued to Scott Aviation Corp., October 3, 1946.

10. M.S.A. demand-type oxygen apparatus (1/2-hour self-contained compressed-oxygen breathing apparatus). Approval BM-1309, issued to Mine Safety Appliances Co., October 3, 1946.

11. M.S.A. demand-type air apparatus (1/2-hour self-contained compressed-air breathing apparatus). Approval BM-1310, issued to Mine Safety Appliances Co., November 26, 1946.

Approved self-contained breathing apparatus are shown in figures 1, 2, and 3.

Gas Masks Approved Under Schedules 14, 14A, 14B, 14D, and 14E

Type A: Acid-Gas Masks

1. M.S.A. hydrocyanic-acid-gas mask. Approvals BM-1413 (regular-size canister) and BM-1414 (supersize canister), issued to Mine Safety Appliances Co., December 9, 1938.

2. Acme chlorine-gas mask. Approval BM-1421, issued to Acme Protection Equipment Co., Inc., April 21, 1939.

3. M.S.A. chlorine-gas mask. Approval BM-1422, issued to Mine Safety Appliances Co., May 26, 1939.

4. Davis hydrocyanic-acid-gas mask. Approval BM-1424, issued to Davis Emergency Equipment Co., Inc., December 11, 1939.

5. Willson chlorine-gas mask. Approval BM-1426, issued to Willson Products, Inc., March 6, 1940.

6. Davis chlorine-gas mask. Approval BM-1427, issued to Davis Emergency Equipment Co., Inc., June 26, 1940.

7. Willson hydrocyanic-acid-gas mask. Approval BM-1428, issued to Willson Products, Inc., August 30, 1940.

8. Bullard chlorine-gas mask. Approval BM-1430, issued to E. D. Bullard Co., February 10, 1941. (Inactive)

9. Bullard hydrocyanic-acid-gas mask. Approval BM-1431, issued to E. D. Bullard Co., February 10, 1941. (Inactive)

10. Bullard chlorine-gas mask. Extension of approval BM-1426, issued to E. D. Bullard Co., May 20, 1947.

11. Bullard hydrocyanic-acid-gas mask. Extension of approval BM-1428, issued to E. D. Bullard Co., May 20, 1947.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Information... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 9 of 35 asbestosclaims.law/library/25218/9

Type B: Organic-Vapor Masks

1. M.S.A. organic-vapor mask. Approval BM-1415, issued to Mine Safety Appliances Co., July 28, 1936.

2. Davis organic-vapor mask. Approval BM-1417, issued to Davis Emergency Equipment Co., Inc., May 3, 1938.

3. Acme organic-vapor mask. Approval BM-1418, issued to Acme Protection Equipment Co., Inc., May 13, 1938.

4. Bullard organic-vapor mask. Approval BM-1419, issued to E. D. Bullard Co., July 15, 1938. (Inactive)

5. Willson organic-vapor mask. Approval BM-1423, issued to Willson Products, Inc., October 6, 1939.

6. Willson organic-vapor mask with large-size canister. Approval BM-1437, issued to Willson Products, Inc., August 5, 1944.

7. M.S.A. organic-vapor mask with supersize G.M.A. canister. Approval BM-1441, issued to Mine Safety Appliances Co., August 2, 1946.

8. Bullard organic-vapor mask. Extension of approval BM-1423, issued to E. D. Bullard Co., May 20, 1947.

9. Bullard organic-vapor mask with large-size canister. Extension of approval BM-1437, issued to E. D. Bullard Co., May 20, 1947.

Type BE: Organic-Vapor, Toxic-Dust, Fume, Mist and Fog Masks

1. Willson WIG-LG1-G mask for organic vapors and toxic dusts, fumes, mists and fogs. Approval BM-1446, issued to Willson Products, Inc., April 17, 1950.

Type AB: Acid-Gas and Organic-Vapor Masks

1. M.S.A. acid-gas and organic-vapor mask. Approval BM-1409, issued to Mine Safety Appliances Co., January 23, 1930.

2. M.S.A. hydrogen sulfide and petroleum-vapor mask. Approval BM-1410, issued to Mine Safety Appliances Co., July 16, 1930. (Inactive)

3. Davis acid-gas and organic-vapor mask. Approval BM-1411, issued to Davis Emergency Equipment Co., Inc., January 19, 1931. (Inactive)

4. M.S.A. hydrogen sulfide and petroleum-vapor mask. Approval BM-1412, issued to Mine Safety Appliances Co., September 14, 1931. (Inactive)

5. M.S.A. hydrogen sulfide and petroleum-vapor mask. Approvals BM-1416 and BM-1416A issued to Mine Safety Appliances Co., June 16, 1937, and July 1, 1937, respectively.

6. Willson hydrogen sulfide and petroleum-vapor mask. Approval BM-1444, issued to Willson Products, Inc., April 18, 1949.

7. Willson WIG-LG3 acid-gas and organic-vapor mask. Approval BM-1450, issued to Willson Products, Inc., March 22, 1951.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 10 of 35 asbestosclaims.law/library/25218/10

Type ABE: Acid-Gas, Organic-Vapor, Toxic-Dust, Fume, Mist, and Fog Masks

1. Willson WIG-LG3-G acid-gas, organic-vapor, toxic-dust, fume, mist and fog mask. Approval BM-1451, issued to Willson Products, Inc., March 22, 1951.

2. Bullard acid-gas, organic-vapor, toxic-dust, fume, mist, and fog mask. Extension of approval BM-1451, issued to E. D. Bullard Co., May 29, 1951.

Type C: Ammonia-Gas Masks

1. M.S.A. ammonia-gas mask. Approval BM-1401, issued to Mine Safety Appliances Co., April 10, 1920. (Inactive)

2. M.S.A. ammonia-gas mask. Approval BM-1404, issued to Mine Safety Appliances Co., March 10, 1926. (Inactive)

3. LaFrance ammonia-gas mask. Extension of approval BM-1401, issued to American-LaFrance & Foamite Industries, Inc., June 23, 1927. (Inactive)

4. M.S.A. ammonia-gas mask. Approval BM-1406, issued to Mine Safety Appliances Co., February 14, 1928.

5. Davis ammonia-gas mask. Approval BM-1408, originally issued to Bullard-Davis, Inc., December 19, 1928; later transferred to Davis Emergency Equipment Co., Inc. (Inactive)

6. LaFrance ammonia-gas mask. Extension of approval BM-1408, issued to American-LaFrance & Foamite Industries, Inc., November 18, 1930. (Inactive)

7. McDonald ammonia-gas mask. Extension of approval BM-1406, issued to B. F. McDonald Co., May 17, 1938.

8. Acme ammonia-gas mask. Approval BM-1420, issued to Acme Protection Equipment Co., Inc., March 25, 1939.

9. Willson ammonia-gas mask. Approval BM-1425, issued to Willson Products, Inc., December 20, 1939.

10. Bullard ammonia-gas mask. Approval BM-1429, issued to E. D. Bullard Co., February 10, 1941. (Inactive)

11. Willson ammonia-gas mask with large-size canister. Approval BM-1438, issued to Willson Products, Inc., September 22, 1944.

12. LaFrance ammonia-gas mask. Extension of approval BM-1406, issued to American-LaFrance & Foamite Industries, Inc., February 20, 1946.

13. M.S.A. ammonia- with supersize G.M.D. canister. Approval BM-1442, issued to Mine Safety Applicances Co., August 29, 1946.

14. Bullard ammonia-gas mask. Extension of approval BM-1425, issued to E. D. Bullard Co., May 20, 1947.

15. Bullard ammonia-gas mask with large-size canister. Extension of approval BM-1438, issued to E. D. Bullard Co., May 20, 1947.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 11 of 35 asbestosclaims.law/library/25218/11

16. M.S.A. new ammonia-gas mask. Approval BM-1449, issued to Mine Safety Appliances Co., December 19, 1950.

17. LaFrance ammonia-gas mask. Extension of approval BM-1449, issued to American-LaFrance-Foamite Corp., March 9, 1951.

18. Davis ammonia-gas mask. Approval BM-1452, issued to Davis Emergency Equipment Co., Inc., March 29, 1951.

Type D: Carbon Monoxide-Gas Masks

1. M.S.A. self-rescuer. Approval BM-1402, issued to Mine Safety Appliances Co., March 6, 1924. (Inactive)

2. M.S.A. self-rescuer. Approval BM-1447, issued to Mine Safety Appliances Co., April 17, 1950.

Type N: Universal Gas Masks

Universal gas masks with filters that afford respiratory protection against smokes from ordinary fires and limited respiratory protection against dusts, fumes, mists, and fogs but do not afford respiratory protection against the toxic smokes of warfare.

1. M.S.A. All-Service gas mask. Approval BM-1403, issued to Mine Safety Appliances Co., July 1, 1925. (Inactive)

2. M.S.A. All-Service gas mask. Approval BM-1405, issued to Mine Safety Appliances Co., August 24, 1933.

3. McDonald All-Service gas mask. Extension of approval BM-1405, issued to B. F. McDonald Co., October 2, 1937.

4. Willson WUG-N1 universal gas mask. Approval BM-1432, issued to Willson Products, Inc., February 2, 1942. (Inactive)

5. Acme All-Purpose gas mask. Approval BM-1435, issued to Acme Protection Equipment Co., Inc., September 10, 1942.

6. Bullard universal gas mask. Approval BM-1439, issued to E. D. Bullard Co., May 16, 1945. (Inactive)

7. Bullard universal gas mask. Extension of approval BM-1432, issued to E. D. Bullard Co., May 20, 1947.

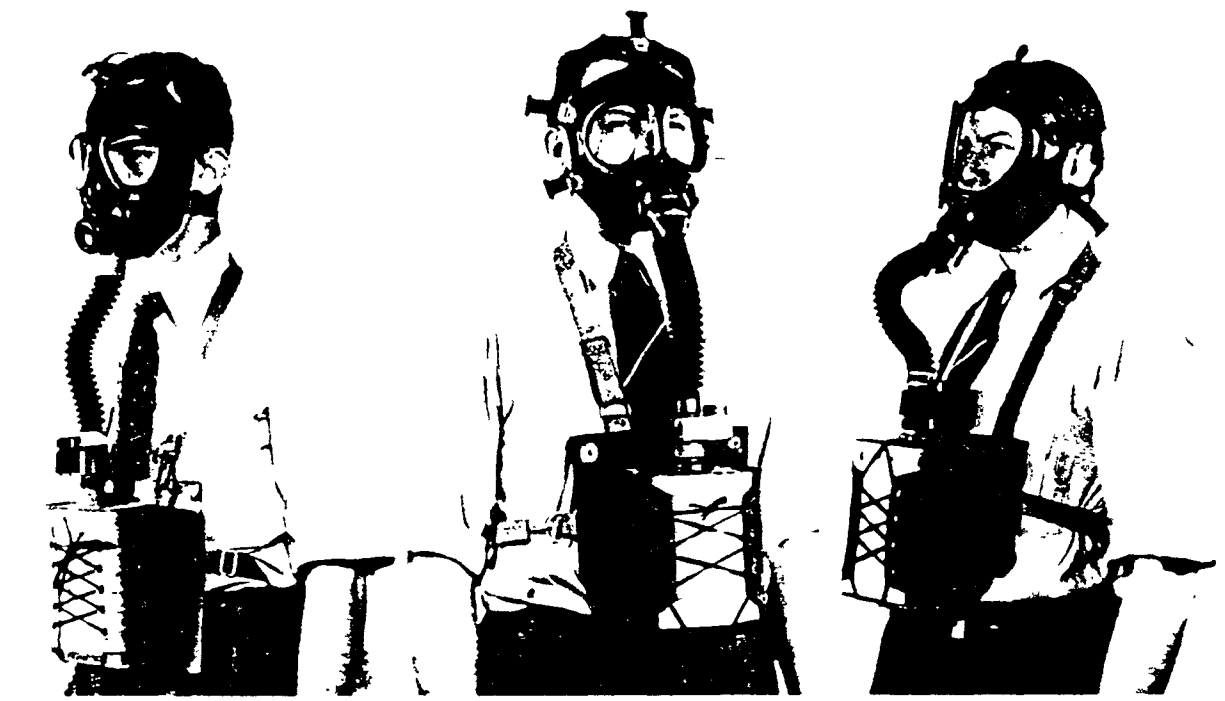
8. Willson WUG-N1 universal gas mask. Approval BM-1443, issued to Willson Products, Inc., May 25, 1948.

9. Bullard Multigas universal gas mask. Extension of approval BM-1443, issued to E. D. Bullard Co., January 12, 1949.

Universal gas masks with filters that afford respiratory protection against toxic dusts, fumes, mists, fogs, and smokes.

1. Willson WUG-N2 universal gas mask. Approval BM-1433, issued to Willson Products, Inc., September 9, 1942. (Inactive)

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 12 of 35 asbestosclaims.law/library/25218/12



Willson Universal Gas Mask, WUG-NI BM-1443

M. S. A. All Service Gas Mask, Model S BM-1434

Acme All-Purpose Gas Mask, Type N BM-1435



La France Ammonia Mask, BM-1406

Davis Organic Vapor Mask, BM-1417

Bullard Chlorine Gas Mask, BM-1426

Figure 4. - Typical approved gas masks.

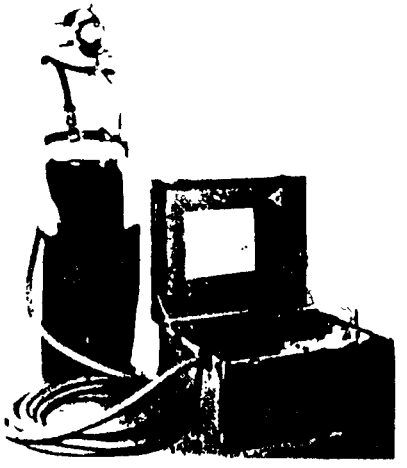
Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/13



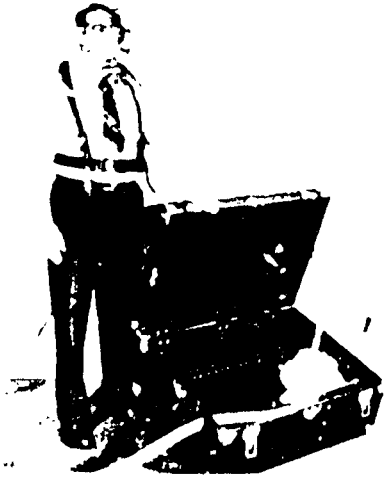
Bullard Hose Mask,
BM-1903



La France Fresh-Air Mask,
Model A BM-1905A



M. S. A. Combination Hose Mask,
BM-1905A



Davis Hose Mask,
BM-1906



Acme Supplied-Air Respirator
Type A BM-1910

Figure 5. - Type A supplied-air respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/14

2. M.S A. All-Service, Model S, gas mask. Approval BM-1434, issued to Mine Safety Appliances Co., September 30, 1942.

3. LaFrance Protexall gas mask. Extension of approval BM-1434, issued to American-LaFrance & Foamite Industries, Inc., March 2, 1943.

4. Acme Model FD universal gas mask. Approval BM-1436, issued to Acme Protection Equipment Co., Inc., October 27, 1943.

5. Bullard universal gas mask. Approval BM-1440, issued to E. D. Bullard Co., May 16, 1945. (Inactive)

6. Bullard universal gas mask. Extension of approval BM-1433, issued to E. D. Bullard Co., May 20, 1947.

7. Willson WUG-N2 universal gas mask. Approval BM-1445, issued to Willson Products, Inc., June 29, 1949.

8. Bullard Smokeater universal gas mask. Extension of approval BM-1445, issued to E. D. Bullard Co., December 7, 1949.

9. Davis universal gas mask. Approval BM-1448, issued to Davis Emergency Equipment Co., Inc., August 16, 1950.

Typical approved gas masks are shown in figure 4.

Supplied-Air Respirators Approved Under Schedules 19, 19A, and the Amendment to Schedule 19A

Type A: Hose Masks

1. M.S.A. combination hose mask. Approval BM-1901, issued to Mine Safety Appliances Co., May 29, 1929. (Inactive)

2. Davis hose mask. Approval BM-1902, issued to Davis Emergency Equipment Co., Inc., March 30, 1931.

3. Bullard hose mask. Approval BM-1903, issued to E. D. Bullard Co., April 14, 1933.

4. Davis hose mask. Approval BM-1904, issued to Davis Emergency Equipment Co., Inc., October 29, 1934.

5. M.S.A. combination hose mask. Approval BM-1905A, issued to Mine Safety Appliances Co., July 2, 1935.

6. Davis hose mask. Approval BM-1906, issued to Davis Emergency Equipment Co., Inc., August 2, 1935.

7. LaFrance fresh-air mask. Extension of approval BM-1905A, issued to American-LaFrance & Foamite Industries, Inc., September 20, 1937.

8. Acme supplied-air respirator, type A. Approval BM-1910, issued to Acme Protection Equipment Co., July 16, 1938.

Approved type A supplied-air respirators are shown in figure 5.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 15 of 35 asbestosclaims.law/library/25218/15

Type B: Special Hose Masks Without Blowers

1. Davis air-line mask. Approval BM-1913, issued to Davis Emergency Equipment Co., Inc., March 10, 1939.

2. Bullard Simplex hose mask. Approval BM-1916, issued to E. D. Bullard Co., October 14, 1939.

Approved type B supplied-air respirators are shown in figure 6.

Type C: Air-line Respirators

Continuous-flow-class air-line respirators, which supply air to the interior of the facepiece continuously at a set rate.

1. M.S.A. air-line respirator. Approvals BM-1909 and BM-1909A, issued to Mine Safety Appliances Co., July 15, 1938, and May 19, 1947, respectively. (BM-1909A Inactive)

2. Willson air-line respirator, models GA, GB, and GC. Approval BM-1912, issued to Willson Products, Inc., October 7, 1938.

3. Cesco No. 602 Healthguard direct-air mask. Approval BM-1917, issued to Chicago Eye Shield Co., August 17, 1940.

4. METCO air-line respirator. Extension of approval BM-1920, issued to Metallizing Engineering Co., Inc., December 8, 1948.

5. Cesco No. 600 Healthguard Hood. Approval BM-1925, issued to Chicago Eye Shield Co., August 15, 1950.

6. M.S.A. Lead Hood. Approval BM-1926, issued to Mine Safety Appliances Co., May 9, 1951.

7. McDonald Lead Hood. Extension of approval BM-1926, issued to B. F. McDonald Co., September 4, 1951.

8. McDonald Lead-Dust Helmets Nos. 177A100 and 177A100-1. Approval BM-1927, issued to B. F. McDonald Co., October 3, 1951.

Demand-class air-line respirators, which supply air to the interior of the facepiece only when the wearer inhales and at a rate governed by his breathing.

1. M.S.A. Demand-type airline respirator. Approval BM-1922, issued to Mine Safety Appliances Co., May 27, 1949.

2. Scott Demand respirator. Approval BM-1924, issued to Scott Aviation Corp., September 28, 1949.

Approved type C supplied-air respirators are shown in figures 7 and 8.

Type E: Abrasive-Blasting Helmets, Hoods, or Masks

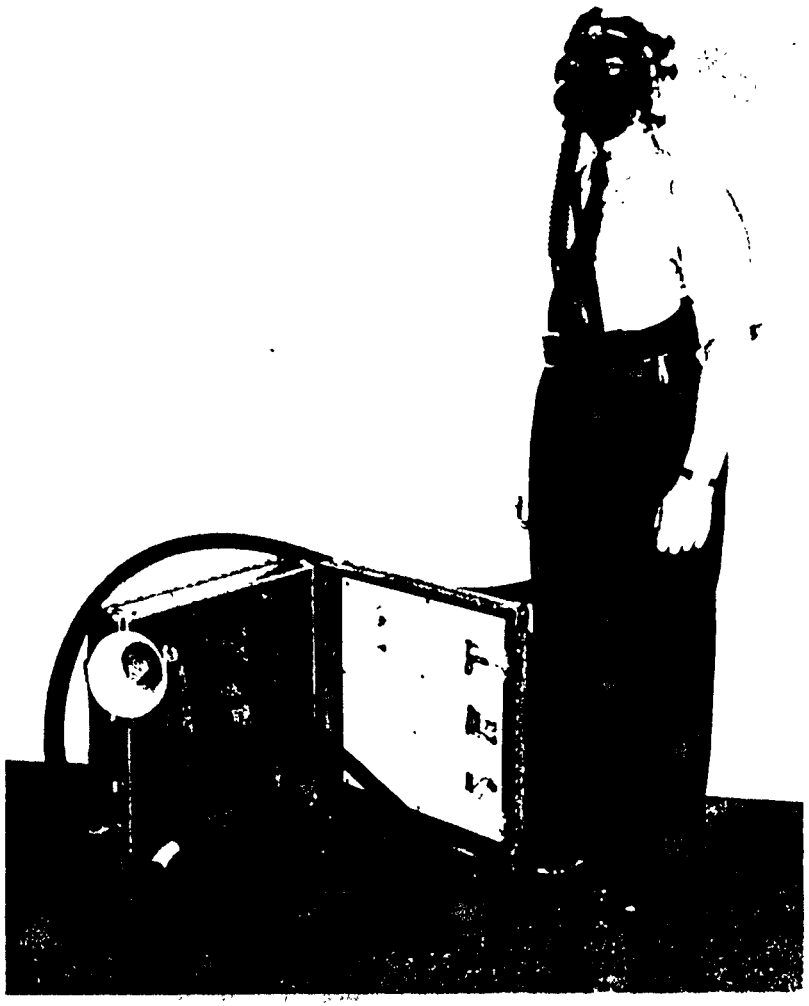
1. M.S.A. abrasive mask. Approvals BM-1907 and BM-1907A, issued to Mine Safety Appliances Co., July 15, 1938, and May 19, 1947, respectively. (BM-1907A Inactive)

2. Pangborn blast helmet, type DD-4. Approval BM-1908, issued to Pangborn Corp., July 15, 1938.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 16 of 35 asbestosclaims.law/library/25218/16



Davis Air-line Mask,
BM-1913



Bullard Simplex Hose Mask,
BM-1916

Figure 6. - Type B supplied-air respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/17



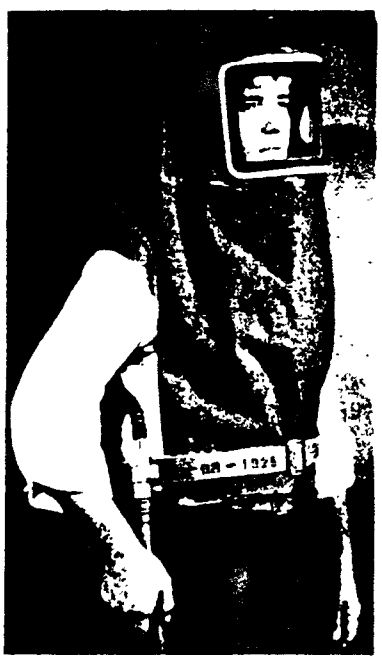
M. S. A. Airline Respirator,
BM-1909



Willson Air-line Respirator,
BM-1912



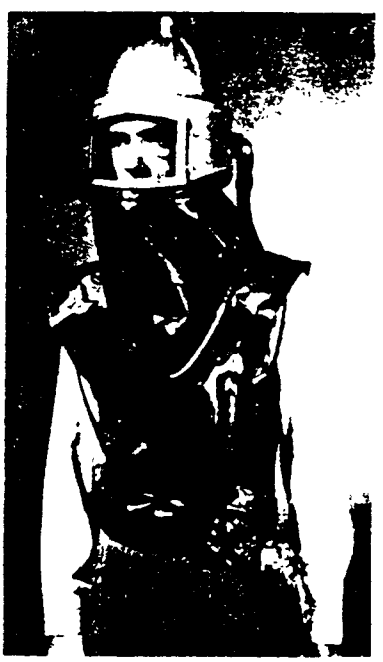
Cesco No. 602 Healthguard
Direct Air Mask,
BM-1917



Cesco No. 600
Healthguard Hood,
BM-1925



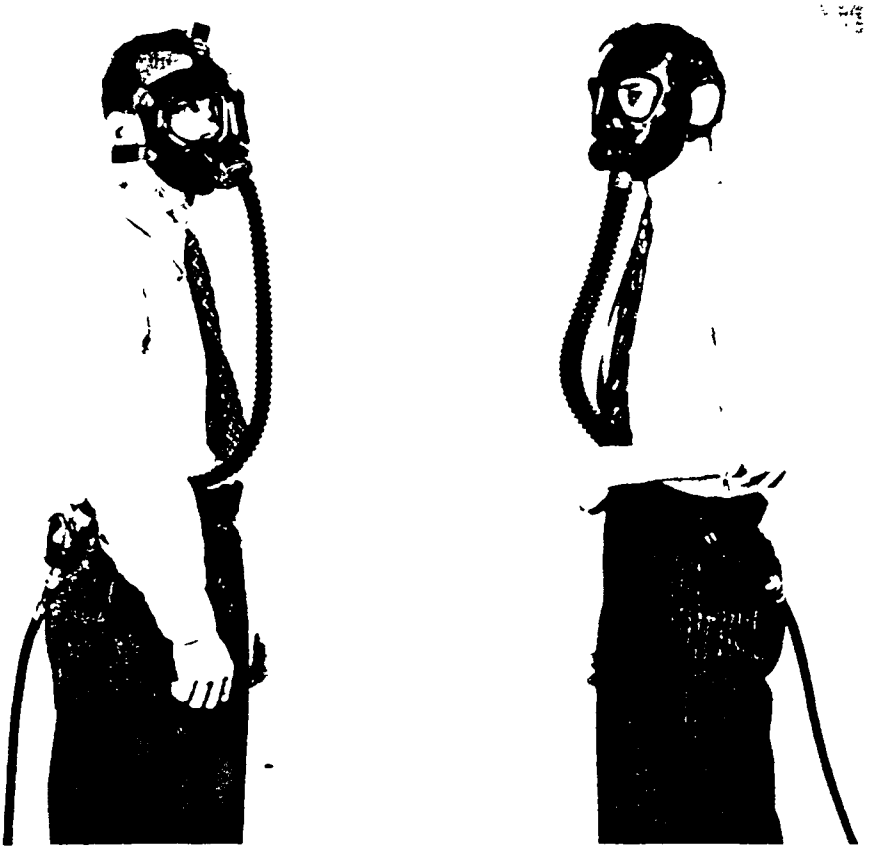
M. S. A. and McDonald
Lead Hood,
BM-1926



McDonald Lead Dust Helmet,
BM-1927

Figure 7. - Type C continuous-flow class
supplied-air respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/18



M. S. A. Demand-type Airline Respirator, BM-1922

Scott Demand Respirator, BM-1924

Figure 8. - Type C demand-class supplied-air respirators.

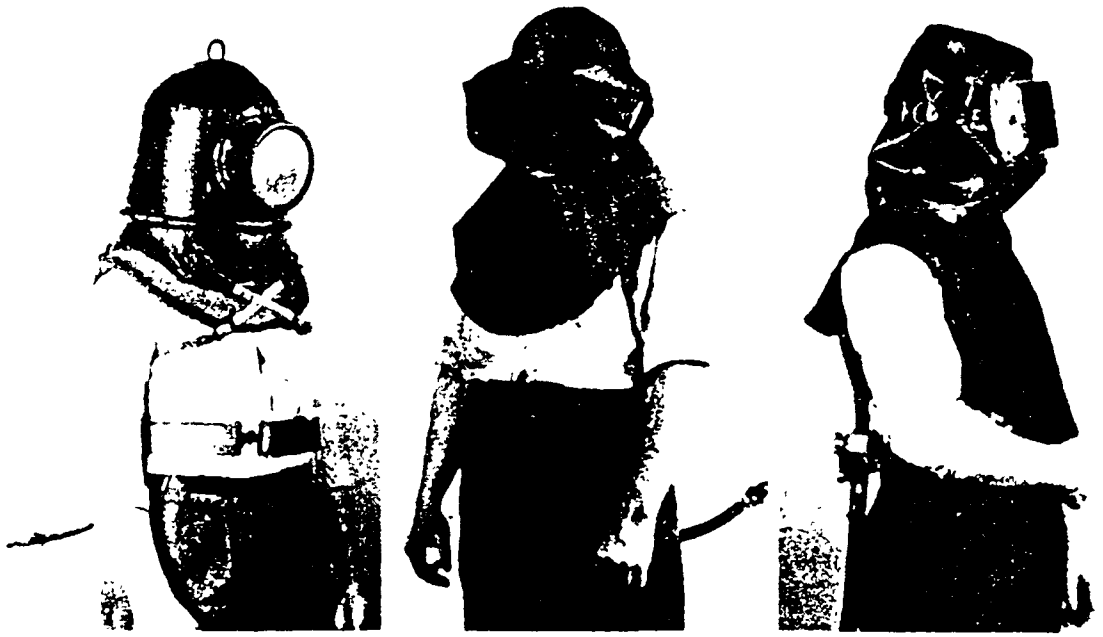
Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/19



M. S. A. Abrasive Mask, BM-1907

Pangborn Blast Helmet, DD-4 BM-1908

Sly Purair Helmet, BM-1911



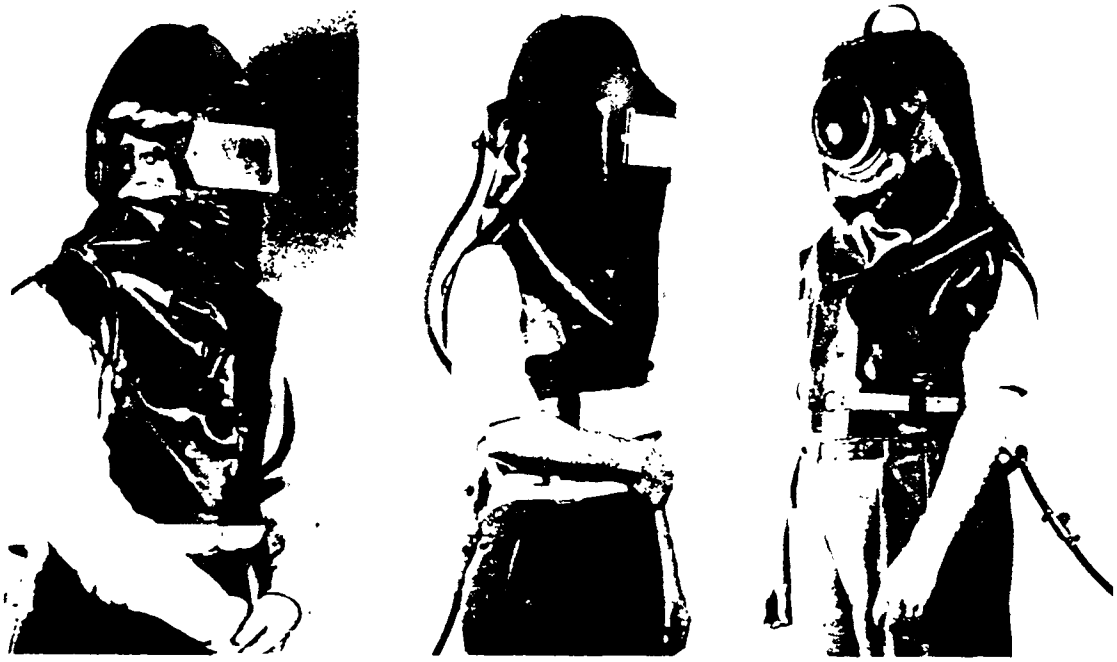
Willson Abrasive Blasting Helmet, No. 31 BM-1914

Pangborn Blast Helmet, DF-2 BM-1915

Cesco Healthguard Mask, No. 602 BM-1918

Figure 9. - Type CE supplied-air respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/20



M.S.A. and McDonald Blastfoe Abrasive Helmet, BM-1919

Bullard Abrasive Blasting Helmet, No. V BM-1921

Willson Lightweight Abrasive Blasting Helmet, BM-1923



M.S.A. and McDonald Blastfoe Abrasive Helmet, BM-1926

McDonald Sandblast and Shotblast Helmet, BM-1927

Figure 10. - Type CE supplied-air respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/21

3. Sly Purair helmet. Approval BM-1911, issued to W. W. Sly Manufacturing Co., July 16, 1938.

4. Willson No. 31 abrasive-blasting helmet. Approval BM-1914, issued to Willson Products, Inc., March 10, 1939.

5. Pangborn blast helmet, type DF-2. Approval BM-1915, issued to Pangborn Corp., March 23, 1939.

6. Cesco No. 602 Healthguard mask. Approval BM-1918, issued to Chicago Eye Shield Co., January 4, 1941.

7. M.S.A. Blastfoe abrasive helmet. Approval BM-1919, issued to Mine Safety Appliances Co., October 1, 1946. (Inactive)

8. McDonald Blastfoe abrasive helmet. Extension of approval BM-1919, issued to B F. McDonald Co., October 3, 1946. (Inactive)

9. M.S.A. abrasive mask. Approval BM-1920, issued to Mine Safety Appliances Co., April 30, 1948.

10. METCO abrasive mask. Extension of approval BM-1920, issued to Metallizing Engineering Co., Inc., April 30, 1948.

11. Bullard abrasive-blasting helmet No. V. Approval BM-1921, issued to E. D. Bullard Co., September 9, 1948.

12. Willson No. 51 lightweight abrasive-blasting helmet. Approval BM-1923, issued to Willson Products, Inc., July 19, 1949.

13. M.S.A. Blastfoe Abrasive Helmet. Approval BM-1926, issued to Mine Safety Appliances Co., May 9, 1951.

14. McDonald Blastfoe Abrasive Helmet. Extension of approval BM-1926, issued to B. F. McDonald Co., September 4, 1951.

15. McDonald Sandblast Helmet No. 177A200 and Shotblast Helmet No. 177A300. Approval BM-1927, issued to B. F. McDonald Co., October 3, 1951.

Approved type CE supplied-air respirators are shown in figures 9 and 10.

Dispersoid (Dust, Fume, and Mist) Respirators Approved Under Schedule 21

For the purpose of these approvals, the following definitions of the terms "dust," "fume," and "mist" are used:

Dust. - Dispersoids or particulate matter, smaller than about 0.1 mm. or 100 microns, formed by the disintegration of solid materials by such processes as crushing, grinding, and abrading.

Fume. - Solid dispersoids formed by the condensation of vapors, such as those from heated metals and other substances.

Mist. - Liquid dispersoids formed by the disintegration of a liquid by such processes as spray-coating and atomizing.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 22 of 35 asbestosclaims.law/library/25218/22

Pneumoconiosis-Producing and Nuisance-Dust Respirators

These respirators are approved only for protection against the inhalation of pneumoconiosis- (silicosis- and asbestosis-) producing dusts, such as free silica and asbestos, and nuisance dusts, such as aluminum, cellulose, cement, charcoal, coal, coke, flour, gypsum, iron ore, limestone, and wood.

1. M.S.A. Comfo respirator.9/ Approval BM-2101, issued to Mine Safety Appliances Co., January 7, 1935. (Inactive)

2. Willson bag respirator No. 300. Approval BM-2102, issued to Willson Products, Inc., January 21, 1935. (Inactive)

3. Willson bag respirator No. 400. Approval BM-2103, issued to Willson Products, Inc., January 21, 1935.

4. Pulmosan M-15, pouch-type filter respirator. Approval BM-2104, issued to Pulmosan Safety Equipment Corp., February 9, 1935. (Inactive)

5. Biever respirator. Approval BM-2105, issued to Standard Safety Equipment Co., March 5, 1935. (Inactive)

6. Willson bag respirator No. 4. Approval BM-2106, issued to Willson Products, Inc., May 27, 1935. (Inactive)

7. Pulmosan M-1100 pouch-type filter respirator. Approval BM-2109 issued to Pulmosan Safety Equipment Corp., March 23, 1936. (Inactive)

8. Dover No. 24 Dupor respirator. Approval BM-2111, issued to H. S. Dover, September 15, 1936.

9. Desco No. 90 Healthguard respirator. Approval BM-2113, issued to Chicago Eye Shield Co., December 16, 1936.

10. McDonald Dustfoe respirator. Approval BM-2115, issued to B. F. McDonald Co., October 8, 1937. (Inactive)

11. M.S.A. Dustfoe respirator. Extension of approval BM-2115, issued to Mine Safety Appliances Co., November 23, 1937. (Inactive)

12. Willson bag respirator No. 100. Approval BM-2117, issued to Willson Products, Inc., December 27, 1937. (Inactive)

13. Willson Rotiform respirator No. 200. Approval BM-2118, issued to Willson Products, Inc., December 30, 1937.

14. Willson respirator No. 750.10/ Approval BM-2119, issued to Willson Products, Inc., January 3, 1938.

15. Pulmosan D-4100 Duo-filter respirator. Approval BM-2120, issued to Pulmosan Safety Equipment Corp., January 12, 1938. (Inactive)

9/ This respirator is also approved for protection against inhalation of pneumoconiosis-producing, chromic acid, and nuisance mists.

10/ See footnote 9.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 23 of 35 asbestosclaims.law/library/25218/23

16. A.O. R1000 respirator. Approval BM-2121, issued to American Optical Co., February 3, 1938.

17. Hygeia Filto-Ring No. 28 respirator. Approval BM-2122, issued to Hygeia Filtering Corp., March 23, 1938. (Inactive)

18. Cover Dupor Skin-A-Cat respirator No. 40. Approval BM-2129, issued to H. S. Cover, July 5, 1939.

19. M.S.A. Comfo respirator.[11] Approval BM-2130, issued to Mine Safety Appliances Co , August 23, 1939. (Inactive)

20. McDonald Dustfoe respirator.[12] Approval BM-2132, issued to B. F. McDonald Co., August 23, 1939.

21. M.S.A. Dustfoe respirator.[13] Extension of approval BM-2132, issued to Mine Safety Appliances Co., August 23, 1939.

22. M.S.A. alkali-dust respirator. Approval BM-2136, issued to Mine Safety Appliances Co., December 1, 1939. (Inactive)

23. A.O. R9100 respirator. Approval BM-2137, issued to American Optical Co., March 6, 1940.

24. Willson respirators Nos. 5[14] and 45.[15] Approval BM-2140, issued to Willson Products, Inc., September 28, 1940.

25. DeVilbiss MSD respirator. Approval BM-2141, issued to The DeVilbiss Co., October 3, 1940.

26. Willson respirator No. 10. Approval BM-2146, issued to Willson Products, Inc., September 11, 1941.

27. McDonald Clear-Vue Dustfoe respirator.[16] Approval BM-2147, issued to B. F. McDonald Co., July 16, 1942.

28. M.S.A. Clear-Vue Dustfoe respirator.[17] Extension of approval BM-2147, issued to Mine Safety Appliances Co., July 16, 1942.

29. Pulmosan respirator No. M-500. Approval BM-2150, issued to Pulmosan Safety Equipment Corp., September 22, 1944.

30. Cesco respirator No. 94. Approval BM-2153, issued to Chicago Eye Shield Co., March 23, 1945.

31. Pulmosan S-600 respirator. Approval BM-2158, issued to Pulmosan Safety Equipment Corp., March 1, 1949.

32. Pulmosan Mn 500 respirator. Approval BM-2159, issued to Pulmosan Safety Equipment Corp., April 26, 1949.

11/ See footnote 9.
12/ See footnote 9.
13/ See footnote 9.
14/ See footnote 9.
15/ See footnote 9.
16/ See footnote 9.
17/ See footnote 9.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 24 of 35 asbestosclaims.law/library/25218/24

Other respirators approved for protection against pneumoconiosis-producing and nuisance dusts are listed under dust respirators and under fume respirators.

Toxic-Dust Respirators

These respirators are approved only for protection against the inhalation of toxic dusts that are not significantly more toxic than lead, such as arsenic, cadmium, chromium, lead, manganese, selenium, vanadium, and their compounds.

1. M.S.A. Comfo respirator. Approval BM-2107, issued to Mine Safety Appliances Co., August 9, 1935. (Inactive)

2. Pulmosan L-2100 pouch-type filter respirator. Approval BM-2110, issued to Pulmosan Safety Equipment Corp., July 17, 1936. (Inactive)

3. Willson Rotiform respirator No. 200 L. Approval BM-2123, issued to Willson Products, Inc., April 18, 1938.

4. Willson respirator No. 750 L. Approval BM-2125, issued to Willson Products, Inc., October 19, 1938.

5. McDonald Dustfoe respirator. Approval BM-2126, issued to B. F. McDonald Co., March 10, 1939. (Inactive)

6. M.S.A. Dustfoe respirator. Extension of approval BM-2126, issued to Mine Safety Appliances Co., March 10, 1939. (Inactive)

7. Willson respirators Nos. 5L and 45L. Approval BM-2143, issued to Willson Products, Inc., December 19, 1940.

8. A.O. R9100T respirator. Approval BM-2144, issued to American Optical Co., May 19, 1941.

9. Hygeia Reef No. 12 respirator. Approval BM-2145, issued to Hygeia Filtering Corp., July 15, 1941. (Inactive)

10. Pulmosan L-300 respirator. Approval BM-2160, issued to Pulmosan Safety Equipment Corp., June 30, 1950.

Other respirators that are approved for protection against toxic dusts are listed under dust respirators and fume respirators.

Dust Respirators

These respirators formerly were designated "Type A and lead dust," and "all-dust." They are approved only for protection against the inhalation of dusts that are not significantly more toxic than lead, such as arsenic, asbestos, cadmium, chromium, lead, manganese, selenium, silica, vanadium, and their compounds, and nuisance dusts.

1. Willson bag respirator No. 400L. Approval BM-2108, issued to Willson Products, Inc., September 5, 1935.

2. Pulmosan ML-3100 pouch-type filter respirator. Approval BM-2112, issued to Pulmosan Safety Equipment Corp., November 30, 1936. (Inactive)

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 25 of 35 asbestosclaims.law/library/25218/25

3. Cesco Healthguard No. 91 respirator. Approval BM-2114, issued to Chicago Eye Shield Co., August 6, 1937.

4. Cesco Healthguard No. 92 respirator. Approval BM-2116, issued to Chicago Eye Shield Co., November 8, 1937.

5. Cover Dupor No. 46 respirator. Approval BM-2124, issued to H. S. Cover, October 3, 1938.

6. Willson respirator No. 752L. Approval BM-2127, issued to Willson Products, Inc., March 10, 1939. (Inactive)

7. M.S.A. Comfo respirator. Approval BM-2133, issued to Mine Safety Appliances Co., October 13, 1939.

8. McDonald Dustfoe respirator. Approval BM-2134, issued to B. F. McDonald Co., October 13, 1939.

9. M.S.A. Dustfoe respirator. Extension of approval BM-2134, issued to Mine Safety Appliances Co., October 13, 1939.

10. A.O. R1000T respirator. Approval BM-2138, issued to American Optical Co., March 16, 1940.

11. Cesco Healthguard No. 94 respirator. Approval BM-2142, issued to Chicago Eye Shield Co., October 3, 1940.

12. McDonald Clear-Vue Dustfoe respirator. Approval BM-2148, issued to B. F. McDonald Co., July 21, 1942.

13. M.S.A. Clear-Vue Dustfoe respirator. Extension of approval BM-2148, issued to Mine Safety Appliances Co., July 21, 1942.

14. Willson respirator No. 750D.[18] Approval BM-2151, issued to Willson Products, Inc., October 5, 1944.

15. Willson respirators Nos. 5D[19] and 45D.[20] Approval BM-2152, issued to Willson Products, Inc., October 19, 1944.

16. A.O. R2000 respirator. Approval BM-2154, issued to American Optical Co., January 2, 1947.

17. A.O. R5050 respirator.[21] Approval BM-2156, issued to American Optical Co., June 23, 1948.

18. Willson respirators Nos. 6[22] and 46.[23] Approval BM-2161, issued to Willson Products, Inc., June 30, 1950.

18/ See footnote 9.
19/ See footnote 9.
20/ See footnote 9.
21/ See footnote 9.
22/ See footnote 9.
23/ See footnote 9.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 26 of 35 asbestosclaims.law/library/25218/26

19. Willson respirator No. 86.[24] Approval BM-2162, issued to Willson Products, Inc., June 30, 1950.

20. M.S.A. Compact Comfo respirator. Approval BM-2164, issued to Mine Safety Appliances Co., October 16, 1950.

21. DeVilbiss respirator. Extension of approval BM-2154, issued to The DeVilbiss Co., November 3, 1950.

22. DeVilbiss respirator.[25] Extension of approval BM-2156, issued to The DeVilbiss Co., November 20, 1950.

23. Pulmosan L-3100 pouch-type respirator. Approval BM-2165, issued to Pulmosan Safety Equipment Corp., December 11, 1950.

24. M.S.A. Dustfoe #55 respirator. Approval BM-2166, issued to Mine Safety Appliances Co., November 30, 1951.

25. McDonald Dustfoe #55 respirator. Extension of approval BM-2166, issued to B. F. McDonald Co., December 10, 1951.

Other respirators that are approved for protection against dusts are listed under fume respirators.

Fume Respirators

These respirators are approved for protection against the inhalation of fumes that are not significantly more toxic than lead (solid dispersoids or particulate matter formed by the condensation of vapors such as those from heated metals and other substances).

1. Willson respirator No. 770. Approval BM-2128, issued to Willson Products, Inc., April 15, 1939. (Inactive)

2. M.S.A. Comfo respirator. Approval BM-2139, issued to Mine Safety Appliances Co., March 27, 1940.

3. Willson respirators Nos. 570[26] and 780.[27] Approval BM-2149, issued to Willson Products, Inc., August 7, 1942.

4. Willson WHG-DFM respirator.[28] Approval BM-2155, issued to Willson Products, Inc., March 1, 1948.

5. Willson 750F respirator. Approval BM-2157, issued to Willson Products, Inc., August 12, 1948.

6. A.O. R5056 respirator. Approval BM-2163, issued to American Optical Co., June 30, 1950.

24/ See footnote 9.
25/ See footnote 9.
26/ This respirator is also approved for protection against the inhalation of dusts that are not significantly more toxic than lead, and of pneumoconiosis-producing, chromic acid, and nuisance mists.
27/ See footnote 26.
28/ See footnote 26.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 27 of 35 asbestosclaims.law/library/25218/27



M. S. A. Comfo
BM-2101* - 1-7-35
FP - I° - FI°
BM-2130* - 8-23-39
P - I° - FI°



Willson No. 300
BM-2102 - 1-21-35
F - I - FI°



Willson No. 400
BM-2103 - 1-21-35
F - I - FI°



Pulmosan M-15
BM-2104 - 2-9-35
F - I - FI°



Willson No. 4
BM-2106 - 5-27-35
F - I - FI°



Pulmosan M-1100
BM-2109 - 3-23-36
F - I - FI°



Cover No. 24
BM-2111 - 9-15-36
F - FI°



McDonald and M.S.A.
Dustfoe
BM-2115 - 10-8-37
FP - I - FI°
BM-2132* - 8-23-39
P - I - FI°



Willson No. 100
BM-2117 - 12-27-37
F - FI



Willson No. 200
BM-2118 - 12-30-37
F - I - FI°



Willson No. 750
BM-2119* - 1-3-38
P - I - FI°

*These respirators are also approved for pneumoconiosis-producing, chromic acid, and nuisance mists.

CODE: Filter, F = felt; P = paper; and FP = felt + paper.
I = inhalation valves. FI = facelet. ° = use of indicated part is optional.

Figure 11. - Dispersoid respirators. Pneumoconiosis-producing and nuisance dust respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/28



Pulmosan D-4100
BM-2120 - 1-12-38
F - FI°



A. O. R1000
BM-2121 - 2-3-38
F - I - FI°



Hygeia No. 28
BM-2122 - 3-23-38
F



Cover No. 40
BM-2129 - 7-5-39
F - I - FI°



A. O. R9100
BM-2137 - 3-6-40
F - FI°



Willson No. 5
BM-2140* - 9-28-40
P - I - FI°



DeVilbiss MSD
BM-2141 - 10-3-40
F - I



Willson No. 10
BM-2146 - 9-11-41
F - I - FI°



McDonald and M.S.A.
Clear-Vue Dustfoe
BM-2147* - 7-16-42
P - I



Pulmosan M-500
BM-2150 - 9-22-44
F - I - FI°



Pulmosan S-600
BM-2158 - 3-1-49
F - I - FI°



Pulmosan MN-500
BM-2159 - 4-26-49
F - I - FI°

*These respirators are also approved for pneumoconiosis-producing, chromic acid, and nuisance mists.

CODE: Filter, F = felt; and P = paper. I = inhalation valves.
FI = facelet. ° = use of indicated part is optional.

Figure 12. - Dispersoid respirators. Pneumoconiosis-producing and nuisance dust respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/29



Pulmosan ML-3100
BM-2112 - 11-30-36
F - I - FI°



Cesco No. 91
BM-2114 - 8-6-37
F - I



Cesco No. 92
BM-2116 - 11-8-37
F - I°



Cover No. 46
BM-2124 - 10-3-38
F - I - FI°



M.S.A. Comfo
BM-2133 - 10-13-39
P - I° - FI°



A. O. R1000T
BM-2138 - 3-16-40
F - I - FI°



Cesco No. 94
BM-2142 - 10-3-40
P



McDonald and M.S.A.
Clear-Vue Dustfoe
BM-2148 - 7-21-42
P - I



Willson No. 750D
BM-2151* - 10-5-44
P - I - FI°



Willson No. 5D
BM-2152* - 10-19-44
P - I - FI°



A. O. R-2000
BM-2154 - 1-2-47
F - I -FI°



A. O. R-5050
BM-2156* - 6-23-48
F - I - FI°

*These respirators are also approved for pneumoconiosis-producing, chromic acid, and nuisance mists.

CODE: Filter, F = felt, and P = paper. I = inhalation valves.
FI = facelet. ° = use of indicated part is optional.

Figure 13. - Dispersoid respirators. Dust respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/30

DUST RESPIRATORS



Willson No. 46
BM-2161* - 6-30-50
F - I - FI°

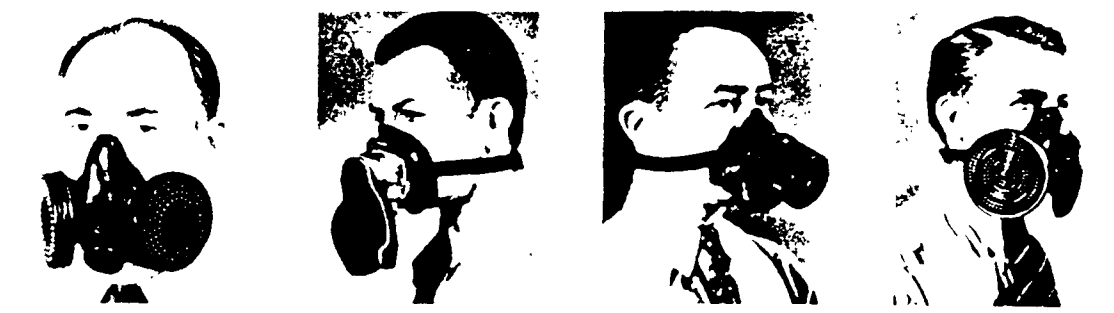
Willson No. 86
BM-2162* - 6-30-50
F - I - FI°

M.S.A. Compact Comfo
BM-2164 - 10-16-50
MW - I - FI°

Pulmosan L-3100
BM-2165 - 12-11-50
F - I - FI°

M.S.A. & McDonald Dustfoe # 55
BM-2166 - 11-30-51
F - I - FI°

TOXIC DUST RESPIRATORS



M.S.A. Comfo
BM-2107 - 8-9-35
FP - I° - FI°

Pulmosan L-2100
BM-2110 - 7-17-36
F - I

Willson No. 200L
BM-2123 - 4-18-38
F - I - FI°

Willson No. 750L
BM-2125 - 10-19-38
P - I - FI°



McDonald and M.S.A. Dustfoe
BM-2126 - 3-10-39
FP - I - FI°

Willson No. 5L
BM-2143 - 12-19-40
P - I - FI°

A. O. R9100T
BM-2144 - 5-19-41
F

Pulmosan L-800
BM-2160 - 6-30-50
F - I - FI°

*These respirators are also approved for pneumoconiosis-producing, chromic acid, and nuisance mists.

CODE: Filter, F = felt; P = paper; FP = felt + paper; and MW = mineral wool.
I = inhalation valves. ° = use of indicated part is optional.

Figure 14. - Dispersoid respirators. Dust respirators and toxic dust respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/31

FUME RESPIRATORS



M. S. A. Comfo
BM-2139 3-27-40
P - I°



Willson No. 570
BM-2149* 8-7-42
P - I



Willson WHG-DFM
BM-2155 3-1-48
P - I



Willson No. 750F
BM-2157 8-12-48
P - I



A. O. R-5056
BM-2163 6-30-50
F - I

MIST RESPIRATORS

See footnotes for dust respirators, pneumoconiosis-producing, and nuisance dust respirators, and fume respirators.

*These respirators are also approved for dusts and for pneumoconiosis-producing, chromic acid, and nuisance mists.

CODE: Filter, F = felt; P = paper. I = inhalation valves.
° = use of indicated part is optional.

Figure 15. - Dispersoid respirators. Fume respirators and mist respirators.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/32



M. S. A. Twin Cartridge
Respirator, G. M. A.
BM-2301



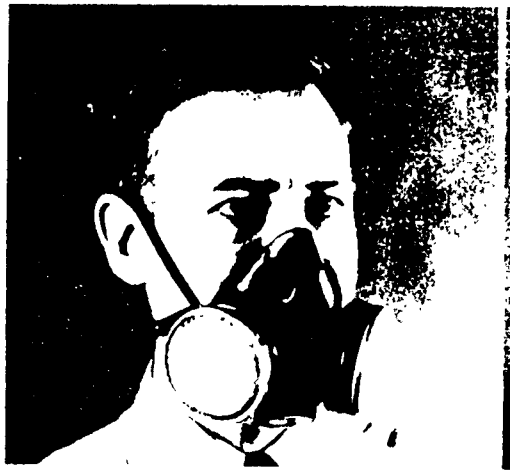
Willson No. 701 Chemical
Cartridge Respirator,
BM-2302



Willson No. 731 Chemical
Cartridge Respirator,
BM-2303



A. O. R-5051 Chemical
Cartridge Respirator,
BM-2304



A. O. R-5055 Dusts* and Organic Vapor
Chemical Cartridge Respirator,
BM-2305

*Approved for protection against dusts.



M. S. A. Gas-Fume** Respirator
BM-2306

**Approved for protection against fumes.

Figure 16. - Nonemergency gas respirators (chemical cartridge respirators) for organic vapors.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25218/33

Mist Respirators

Respirators for protection against pneumoconiosis-producing, chromic acid, and nuisance mists are listed under pneumoconiosis-producing and nuisance-dust respirators, under dust respirators, and under fume respirators.

Approved dispersoid respirators are shown in figures 11, 12, 13, 14, and 15.

Nonemergency Gas Respirators (Chemical-Cartridge Respirators) Approved Under Schedule 23

Type B: Organic Vapor-Respirators

These respirators are approved for respiratory protection in atmospheres not immediately dangerous to life or containing not more than 0.1 percent organic vapors, by volume.

1. M.S.A. twin cartridge-type respirator, G.M.A. Approval BM-2301, issued to Mine Safety Appliances Co., June 4, 1945.

2. Willson No. 701 chemical-cartridge respirator. Approval BM-2302, issued to Willson Products, Inc., August 27, 1945.

3. Willson No. 731 chemical-cartridge respirator. Approval BM-2303, issued to Willson Products, Inc., July 30, 1946.

4. Binks twin-cartridge respirator, type 8. Extension of approval BM-2301, issued to Binks Manufacturing Co., June 18, 1948.

5. A.O. R5051 chemical-cartridge respirator. Approval BM-2304, issued to American Optical Co., July 19, 1949.

6. DeVilbiss chemical-cartridge respirator. Extension of approval BM-2304, issued to The DeVilbiss Co., October 19, 1950.

Type BE: Dispersoid and Organic-Vapor Respirators

These respirators are approved for respiratory protection in atmospheres not immediately dangerous to life and which contain either dispersoids (type stated) that are not significantly more toxic than lead, or not more than 0.1 percent organic vapors, by volume, or both.

1. A.O. R5055 chemical-cartridge respirator. Approval BM-2305 for dusts and organic vapors, issued to American Optical Co., February 3, 1950.

2. M.S.A. Gas-Fume respirator. Approval BM-2306 for fumes and organic vapors, issued to Mine Safety Appliances Co., October 17, 1951.

Approved nonemergency gas respirators are shown in figure 16.

APPROVAL LABELS

To provide purchasers and users with means of identifying approved devices and procuring approved parts when making repairs and replacements, the Bureau requires that all devices marketed under the provisions of the approval system of the Federal Bureau of Mines must have an approval label with the seal of the Bureau, the approval

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 34 of 35 asbestosclaims.law/library/25218/34

number, the name of the manufacturer to whom the approval is issued, and the conditions for which approval is granted. Essential parts of the devices are marked with the approval number. The markings also obligate the manufacturer to maintain the quality of the product and to construct each device, in all its parts, in exact accordance with specifications of the device that the Bureau examined and approved. Any device that exhibits changes in design or includes any parts that were not in the device approved, regardless of whether the change is made by the manufacturer or the consumer, is not permissible and may not bear the Bureau of Mines approval label.

The approval label (metal plate) is affixed to self-contained breathing apparatus. Canister-type gas masks bear a label on the case and on each canister, and the approval number is marked on the facepiece and canister harness, for example, "BM-1400." Type A (hose mask) and type B (special hose mask without blower) supplied-air respirators have the approval label on their cases or containers, and the approval number is marked on the air-supply arrangement, air-supply line, facepiece, and harness. Type C (air-line respirator) and type CE (abrasive-blasting respirator) have the approval label on their cases (if any) or on a special sheet with instructions for use of the device; and the approval number is marked on the air-supply line, air-regulating valve, harness, and the facepiece, hood, or helmet. The containers of dispersoid respirators and the replacement-filter units bear approval labels, and the approval number is marked on the facepiece and each filter unit. The filter units also bear a marking that designates the type of particulate matter for which they are approved, as pneumoconiosis-producing and nuisance dusts, toxic dusts, or fumes.

NAMES AND ADDRESSES OF COMPANIES TO WHICH APPROVALS HAVE BEEN GRANTED

Acme Protection Equipment Co., 3037 West Lake Street, Chicago 12, Ill.
American-LaFrance Foamite Corporation, Elmira, N. Y.
American Optical Co., Southbridge, Mass.
Binks Manufacturing Co., 3114 Carroll Avenue, Chicago 12, Ill.
E. D. Bullard Co., 275 Eighth Street, San Francisco 3, Calif.
Chicago Eye Shield Co., 2300 Warren Boulevard, Chicago 12, Ill.
H. S. Cover, Station A. South Bend, Ind.
Lewis Emergency Equipment Co., Inc., 45 Halleck Street, Newark 4, N. J.
The DeVilbiss Co., Toledo, Ohio.
Draegerwerk Lubeck, Germany.
Hygeia Filtering Corp. (formerly the Hygeia Respirator Co.), 129 East 8th Street, New York 3, N. Y.
B. F. McDonald Co., 5721 West 96th Street, Los Angeles 45, Calif.
Metallizing Engineering Co., Inc., 38-14 30th Street, Long Island City 1, N. Y.
Mine Safety Appliances Co., Braddock, Thomas, and Meade Streets, Pittsburgh 8, Pa.
Pangborn Corp., Hagerstown, Md.
Pulmosan Safety Equipment Corp., 644 Pacific Street, Brooklyn 17, N. Y.
Scott Aviation Corp., Lancaster, N. Y.
Siebe, Gorman & Co., Ltd., London, England.
W. W. Sly Manufacturing Co., 4735 Train Avenue, Cleveland 2, Ohio.
Standard Safety Equipment Co., 232 W. Ontario Street, Chicago 10, Ill.
Willson Products, Inc., Reading, Pa.

Int. - Bu. of Mines, Pgh., Pa.

S. J. Pearce and L. B. Berger, List of Respiratory Protective Devices Approved by the Bureau of Mines, Informatio... Published by AsbestosClaims.Law
ACL Doc 25218 · Page 35 of 35 asbestosclaims.law/library/25218/35