Abstract: The invention is directed to an aircraft spray booth (10) providing for effective removal of particulate matter, overspray and volatile organic compounds from the spray booth area without premature and uneven clogging of the filtration system. The present invention is designed to create an accelerated airflow within the plenum of the spray booth to prevent or minimize stratification of the air and reduce particulate matter fallout. The airflow through the booth (10) is increased by the reduction of the spray booth and filter area to approximately 1/3 of the original booth width. The decrease in the cross sectional area of the spray booth (10) increases the overall speed of the airflow and decreases the volume of air exchanged in the booth. The spray booth (10) is tapered at the reduction area (28) to cause acceleration of the air at the sidewalks (42, 44). The acceleration of air at the sidewalks (42, 44) causes a purging of the air along the sidewalks (42, 44) and prevents paint and other particulate matter from adhering to the sidewalks (42, 44). The reduction in the spray booth area allows lighting (20) to be placed closer to the painted surface in the tail and fuselage section of the aircraft (12) to aid in the accuracy of the painting process.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

| IFC(7)       | B01D 45/00,46/00; B05B 7/00,15/04; B01L 1/04; F24F 7/00,7/06,13/00 |
| US CL        | 454/187,228,234,241,253,277,350; 95/267,268,373; 118/719,300,326 |

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S.: 454/187,228,234,241,253,277,350; 95/267,268,373; 118/719,300,326

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>US 2002/0119254 A1 (DEREGGE) 29 August 2002 (29.08.2002), see entire document, especially Figure 5.</td>
<td>1-22</td>
</tr>
<tr>
<td>A</td>
<td>US 6,273,109 A (BARAL) 14 August 2001 (14.08.2001), see entire document, especially Figure 2.</td>
<td>1-22</td>
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<td>A</td>
<td>US 5,284,518 A (KOHN) 08 February 1994 (08.02.1994), see entire document, especially Figure 1.</td>
<td>1-22</td>
</tr>
<tr>
<td>A</td>
<td>US 5,095,811 A (SHUTTIC et al) 17 March 1992 (17.03.1992), see entire document, especially Figure 2 and column 9, lines 13-6; column 11, lines 5-66.</td>
<td>1-22</td>
</tr>
<tr>
<td>A</td>
<td>US 4,515,072 A (CRISP) 07 May 1985 (07.05.1985), see entire document, especially Figures 1 and 3.</td>
<td>1-22</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

See patent family annex.

Date of the actual completion of the international search: 30 April 2004 (30.04.2004)

Date of mailing of the international search report: 26 OCT 2004

Authorized officer: J.A. Lorenzo

Telephone No.: 571-272-1233

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (703) 305-3230

Form PCT/ISA/210 (second sheet) (July 1998)
Continuation of B. FIELDS SEARCHED Item 3:
EAST Search:
search terms: aircraft, booth, tapered, vehicle, narrow, narrowed, narrowing, taper, tapering, tapered, cross-section, cross-sectional, distance, area, bernoulli, filter, airplane, aeroplane