



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day-24-23HD]

Agency Forms Undergoing Paperwork Reduction Act Review

In accordance with the Paperwork Reduction Act of 1995, the Centers for Disease Control and Prevention (CDC) has submitted the information collection request titled “Exposures, Health Effects, and Controls of Chemicals from Thermal Spray Coating” to the Office of Management and Budget (OMB) for review and approval. CDC previously published a “Proposed Data Collection Submitted for Public Comment and Recommendations” notice on August 7, 2023 to obtain comments from the public and affected agencies. CDC did not receive comments related to the previous notice. This notice serves to allow an additional 30 days for public and affected agency comments.

CDC will accept all comments for this proposed information collection project. The Office of Management and Budget is particularly interested in comments that:

- (a) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- (b) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- (c) Enhance the quality, utility, and clarity of the information to be collected;
- (d) Minimize the burden of the collection of information on those who are to respond, including, through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses; and

(e) Assess information collection costs.

To request additional information on the proposed project or to obtain a copy of the information collection plan and instruments, call (404) 639-7570. Comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review - Open for Public Comments" or by using the search function. Direct written comments and/or suggestions regarding the items contained in this notice to the Attention: CDC Desk Officer, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503 or by fax to (202) 395-5806. Provide written comments within 30 days of notice publication.

Proposed Project

Exposures, health effects, and controls of chemicals from thermal spray coating – New – National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

Thermal spray coating (TSC) is a surface treatment process that enables different types of feedstock material to be deposited on to various substrates—metals, metal alloys, ceramics, and plastics. The process involves spraying a liquid or molten metal coating product under pressure onto a surface where it solidifies and forms a solid coating. The coating material can be pure metals, metal alloys, carbides, oxides, ceramics, and ceramic metals in wire or powder form that will not decompose when melted. Although TSC technology has been around for decades, recently it has been refined and optimized to impart new properties and functionalities to the coatings, applied through numerous processes such as flame-, cold-, plasma-, and electric arc-spraying, arising from the different combinations of sources of thermal and kinetic energy, form

and composition of the feedstock material and other system configurations. TSC processes are relatively simple to use, economical, and have been applied to almost all industrial sectors such as automotive, aerospace, machine shops, electronics, medical, shipyards, and printing.

Important uses include coatings for wear prevention, repair, restoration, thermal insulation/conduction, corrosion/oxidation resistance, seals, and decoration.

TSC is a fast-growing and emerging industry and generates exposures that are known to be hazardous in other settings. However, effects of TSC processes, quantitative exposures, and subsequent health effects remain mostly unknown because of paucity of epidemiologic and exposure studies. Limited data on exposures of workers engaged in TSC and associated operations and personal communications with industrial hygienists in this industry suggests exposures can greatly exceed the current occupational exposure limits, but the prevalence of respiratory abnormalities including occupational asthma and chronic obstructive pulmonary disease in this population remains unknown. In addition, many workplaces conduct TSC work manually or semi-automatically, and some TSC tasks may not be easily amenable to installation of ventilation controls (e.g., during spray-coating of parts with wide surface area).

The purpose of the proposed data collection is to conduct a survey of thermal spray coating facilities to: (1) better understand work practices and controls related to metals, particles, and gases generated during thermal spray coating; (2) identify areas for potential intervention; and (3) identify thermal spray coating facilities willing to participate in future NIOSH exposure and health research. The burden hours are estimated based on limited pilot testing conducted internally using the survey instrument and previous pilot testing done using a similar survey instrument. In these pilot tests, the amount of time for instruction review, collection of mock information, and the survey completion was between 10–30 minutes. The median time of 20 minutes was used to estimate annual burden hours. Currently, the total number of thermal spray coating businesses in the United States is unknown. In 2004, the Air Resources Board (ARB) in California Environmental Protection Agency conducted the Thermal Spraying Facility Survey of

facilities performing thermal spray coating throughout California, and reported 97 companies that potentially used TSC. Based on the California ARB report, we estimated approximately 5,000 thermal spray coating businesses. CDC requests OMB approval for an estimated 1,667 annual burden hours. There are no costs to respondents other than their time to participate.

Estimated Annualized Burden Hours

Type of Respondents	Form Name	Number of Respondents	Number of Responses per Respondent	Average Burden per Response (in hours)
Thermal spray coating facility managers/owners	Survey	5000	1	20/60

Jeffrey M. Zirger,
Lead,
Information Collection Review Office,
Office of Public Health Ethics and Regulations,
Office of Science,
Centers for Disease Control and Prevention.

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