May 13, 2025

PUBLIC VERSION

Via E-Mail

The Honorable Howard W. Lutnick
Secretary of Commerce
U.S. Department of Commerce
14th Street and Constitution Avenue, N.W.
Washington, DC 20230

Attn: DIBPrograms@bis.doc.gov

Re: Request to Include Aluminum Lithographic Printing Plates As A Derivative Aluminum-Intensive Article Subject to Section 232 Measures

Dear Secretary Lutnick:

On behalf of Eastman Kodak Company, and pursuant to the Inclusions Process Notice,[1] we submit this request to include **aluminum lithographic printing plates ("ALPPs")** as a derivative aluminum article subject to the Section 232 measures on aluminum imports, as set forth in Proclamation 9704,[2] Proclamation 9980,[3] and clause 4 of Proclamation 10895.[4] We provide below the information required by the U.S. Department of Commerce to evaluate this request, as specified in the Inclusions Process Notice.

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[1] See Adoption and Procedures of the Section 232 Steel and Aluminum Tariff Inclusions Process, 90 Fed. Reg. 18,780 (Dep't Commerce May 2, 2025) ("Inclusions Process Notice").

[2] See Proclamation 9704 of March 8, 2018, Adjusting Imports of Aluminum Into the United States, 83 Fed. Reg. 11,619 (Mar. 15, 2018).

[3] See Proclamation 9980 of January 24, 2020, Adjusting Imports of Derivative Aluminum Articles and Derivative Steel Articles Into the United States, 85 Fed. Reg. 5,281 (Jan. 29, 2020).

[4] See Proclamation 10895 of February 10, 2025, Adjusting Imports of Aluminum Into the United States, 90 Fed. Reg. 9,807 (Feb. 18, 2025).

I. IDENTIFICATION OF THE APPLICANT

The applicant for this request is Eastman Kodak Company ("Kodak"), the sole U.S. producer of ALPPs, with its corporate headquarters at the following location:

Eastman Kodak Company
343 State Street
Rochester, NY 14650.
Phone: (585) 726-4768
Contact: Paul H. Smith, paul.h.smith@kodak.com
Website: https://www.kodak.com/en/

Kodak manufactures ALPPs at its facility in Columbus, Georgia.

II. DEFINITION OF THE DERIVATIVE ARTICLE

This inclusion request covers **aluminum lithographic printing plates ("ALPPs")**, which consist of a flat substrate containing at least 90 percent aluminum by weight to which an image-capturing coating is applied. The aluminum substrate is generally treated using a mechanical, electrochemical, or chemical graining process, which is followed by one or more anodizing treatments that form a hydrophilic layer on the aluminum substrate. An image-recording, oleophilic layer that is sensitive to light, including but not limited to ultraviolet, visible, or infrared, is dispersed in a polymeric binder material that is applied on top of the hydrophilic layer, generally on one side of the ALPP. The oleophilic light-sensitive layer is capable of capturing an image that is transferred onto the plate by either light or heat. The image applied to an aluminum lithographic printing plate facilitates the production of newspapers, magazines, books, yearbooks, coupons, packaging, and other printed materials through an offset printing process, where the ALPP facilitates the transfer of the image onto the printed media.

This inclusion request covers all ALPPs, irrespective of the dimensions or thickness of the underlying aluminum substrate, whether the plate requires processing after an image is applied to the plate, whether the plate is ready to be mounted to a press and used in printing operations immediately after an image is applied to the plate, or whether the plate has been exposed to light or heat to create an image on the plate or remains unexposed and is free of

any image. It also covers ALPPs produced from an aluminum sheet coil that has been coated with a light-sensitive image-capturing layer.

III. THE TEN-DIGIT HARMONIZED TARIFF SCHEDULE CLASSIFICATION APPLICABLE TO IMPORTED ALPPs

ALPPs primarily enter the United States under the following Harmonized Tariff Schedule ("HTS") classification:

- **3701.30.0000**: The provision for "Photographic plates and film in the flat, sensitized, unexposed, of any material other than paper, paperboard or textiles; instant print film in the flat, sensitized, unexposed, whether or not in packs: . . . Other plates and film, with any side exceeding 255 mm"

Harmonized Tariff Schedule of the United States, Chapter 37 (2025). Merchandise entering the United States under this HTS classification is not subject to any "General" or "Special" duties, but is subject to a "Column 2" duty rate of 25 percent. See id.

IV. ALPPs ARE AN ALUMINUM-INTENSIVE DERIVATIVE PRODUCT

ALPPs are manufactured from lithographic grade aluminum sheet (also called litho-stock), which is a 1XXX-series alloy aluminum sheet, such as 1050 alloy aluminum sheet and 1020 alloy aluminum sheet. 1XXX-series aluminum sheet, the alloy family designation that applies to commercially pure aluminum, has a minimum aluminum content of 99 percent with no other alloying additions. In manufacturing ALPPs, specialized machinery is used to uncoil the lithographic grade aluminum sheet, which then undergoes graining, anodizing, coating, and finishing processes. Graining roughens the substrate surface to make it more hydrophilic. During anodizing, a hydrophilic layer of aluminum oxide is added to the aluminum substrate. During coating, a polymer-based binding material is applied on top of the hydrophilic layer of aluminum oxide. It is this coating that allows an ALPP to capture an image and to transfer the image onto media during the printing process. During finishing, the product is cut to specified dimensions using rotary and scissor knives, after which it is packaged and shipped to customers.

The aluminum sheet input for ALPPs is classified under HTS heading 7606, which is subject to Section 232 measures on aluminum pursuant to Proclamation 9704. See 83 Fed. Reg. 11,619, 11,621 (defining "aluminum articles" as, among others, "aluminum plate, sheet, strip,

and foil (flat rolled products) (HTS 7606 and 7607)"). The aluminum sheet input comprises **85 percent** of the cost of raw materials for manufacturing an ALPP.

V. STATISTICS ON IMPORTS AND DOMESTIC PRODUCTION

Exhibit 1 reproduces the official U.S. import statistics for merchandise classified under HTS subheading 3701.30.0000, which covers the merchandise at issue, for the period 2020 to 2024. As shown in that table, the quantity of general imports[5] of merchandise classified under HTS subheading 3701.30.0000 has surged by 61.2 percent, from 21.6 million square meters in 2020 to 34.8 million square meters in 2024. See **Exhibit 1**. Volumes surged during the COVID-19 pandemic, particularly in 2022, but following that year, import volumes have remained at substantially elevated levels relative to the pre-COVID surge in 2020. See id. As discussed below, these elevated import levels coincide with a major U.S. manufacturer shifting its ALPP manufacturing capacity from the United States to Asia – leaving Kodak as the last remaining U.S. producer of ALPPs. This rapid import growth has led to severe declines in Kodak's production of ALPPs at its Columbus, Georgia facility, as summarized in the table below:

Table 1: Kodak's Production and Capacity Data for ALPPs

	2020	2021	2022	2023	2024	2020-2024 % Change
Production (square meters)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Production Capacity (square meters)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Capacity utilization (%)	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Source: Kodak.

[5] General imports (rather than imports for consumption) are the appropriate measure for imports of ALPPs because Kodak imports raw materials and manufactures finished ALPPs in a foreign trade zone in Columbus, Georgia. When Kodak enters the finished ALPPs into the customs territory of the United States and sells the ALPPs to its U.S. customers, the finished ALPPs are considered imports for consumption under HTS subheading 3701.30. Fujifilm – one of Kodak's primary competitors – operated in a similar fashion before it made the decision to shutter its U.S.-based ALPP production operations in 2022 and outsource the associated jobs and production to China and Japan.

As imported ALPPs flooded the U.S. market, Kodak's production plummeted by **[ ]** percent, falling from **[ ]** square meters in 2020 to **[ ]** square meters in 2024. See supra Table 1. Kodak's falling production quantities have caused its capacity utilization rate to decline by **[ ]** percentage points to a **[ ]** percent. See id. Such low capacity utilization robs Kodak of economies of scale and is not sustainable.

VI. PERTINENT INFORMATION ON THE AFFECTED DOMESTIC INDUSTRY

On November 22, 2024, the Department of Commerce published antidumping duty orders on imports of ALPPs from Japan and China and published a countervailing duty order on imports of ALPPs from China. See Aluminum Lithographic Printing Plates From Japan and the People's Republic of China: Antidumping Order; Aluminum Lithographic Printing Plates From the People's Republic of China: Countervailing Duty Order, 89 Fed. Reg. 92,624 (Dep't Commerce Nov. 22, 2024).

The U.S. International Trade Commission ("ITC") concluded that the domestic industry producing ALPPs – consisting entirely of Kodak by the end of the period of investigation – "is materially injured by reason of imports of ALPs from China and Japan found by Commerce to be sold in the United States at less than fair value and subsidized by the government of China." Aluminum Lithographic Printing Plates from China and Japan, USITC Pub. 5559 (Nov. 2024) at 56. In reaching this conclusion, the ITC found that imports of ALPPs from China and Japan "significantly undersold the domestic like product during the {period of investigation}," enabling those imports "to gain sales and market share over the period, causing a shift in market share from the domestic industry to cumulated subject imports from 2022 to 2023 and between interim periods." Id. at 35; see also id. at 37. As a result, "{t}he domestic industry's production, capacity, capacity utilization, and U.S. shipments {of ALPPs}, all declined sharply from 2021 to 2023 and were generally lower in interim 2024 than in interim 2023." Id. at 38.

The ITC further determined that the domestic industry suffered financial injury by low-priced imports from China and Japan, stating: "{t}he domestic industry's net sales, gross profits, and operating profits also declined by more than apparent U.S. consumption on a percentage basis during that time {2021 to 2023}." Id.

Finally, these adverse trends harmed the domestic industry's employees: "{t}he industry's number of production-related worked ("PRWs"), total hours worked, wages paid, and productivity all declined from 2021 to 2023 and were lower in interim 2024 compared to interim 2023." Id. at 39 (citations omitted).

Provisional measures to offset Chinese government subsidies benefitting ALPPs imported from China went into effect on March 1, 2024,[6] and provisional antidumping measures on imports from China and Japan went into effect on May 1, 2024.[7] Despite being subject to provisional measures for most of 2024, imports of ALPPs from China still increased by 34.5 percent, and imports from Japan remained at a volume that was more than doubled the volume of ALPP imports from Japan in 2020 and 2021. See **Exhibit 1**. Moreover, there are no trade orders restraining imports of ALPPs from other significant sources of U.S. imports, such as Germany, Belgium, and Brazil. See id.

In sum, imports of ALPPs have significantly eroded Kodak's business, which, in turn, imperils Kodak's potential U.S. suppliers of lithographic grade aluminum sheet and its customers (i.e., U.S. entities that purchase ALPPs for use in printing applications).

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[6] See Aluminum Lithographic Printing Plates From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination, and Alignment of Final Determination With Final Antidumping Duty Determination, 89 Fed. Reg. 15,134 (Dep't Commerce Mar. 1, 2024).

[7] See Aluminum Lithographic Printing Plates From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances, and Postponement of Final Determination and Extension of Provisional Measures, 89 Fed. Reg. 35,062 (Dep't Commerce May 1, 2024); Aluminum Lithographic Printing Plates From Japan: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures, 89 Fed. Reg. 35,065 (Dep't Commerce May 1, 2024).

VII. IMPORTS OF THE DERIVATIVE ARTICLE THREATEN TO IMPAIR THE NATIONAL SECURITY AND OTHERWISE UNDERMINE THE OBJECTIVES OF SECTION 232 MEASURES ON ALUMINUM ARTICLES

A. Imports of ALPPs, the Derivative Article, Erode the Customer Base of U.S. Industries That the Department of Commerce Has Already Deemed Essential to the National Security

In the Aluminum Section 232 Report issued on January 17, 2018, the Secretary of Commerce concluded that "aluminum imports are 'weakening our internal economy' and threaten to impair the national security."[8] The Secretary emphasized the importance of aluminum to the national security, which includes both national defense and critical infrastructure objectives. See id. at 2. In order to remedy the threat to national security posed by imports of aluminum articles, President Trump imposed a 10 percent tariff on such imports, effective March 23, 2018. See Proclamation 9704, 83 Fed. Reg. 11,619, 11,621. On January 24, 2020, the President stated that "{t}he net effect of the increase of imports of {certain} derivatives has been to erode the customer base for U.S. producers of aluminum," which undermines the purpose of Section 232 remedy "to remove the threatened impairment of the national security." Proclamation 9980, 85 Fed. Reg. 5,281, 5,282. President Trump, therefore, expanded the Section 232 duty remedy to include certain derivative aluminum articles (e.g., aluminum stranded wire, cables, and plaited bands). See id., 85 Fed. Reg. at 5,283.

On February 10, 2025, President Trump again recognized that imports of derivative articles undermine the Section 232 remedy by eroding the U.S. aluminum industry's customer base, stating:

> Imports of additional derivative aluminum products have increased significantly since the issuance of Proclamation 9704 and Proclamation 9980, eroding the domestic industry's customer base and resulting in depressed demand for aluminum articles produced in the United States.

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[8] U.S. Department of Commerce, Bureau of Industry and Security, "The Effect Of Imports Of Aluminum On The National Security," at 5 (Jan. 17, 2018) (hereinafter, "Aluminum Section 232 Report") (available at https://www.commerce.gov/sites/default/files/the_effect_of_imports_of_aluminum_on_the_national_security_-_with_redactions_-_20180117.pdf) (accessed May 8, 2025).

Proclamation 10895, 90 Fed. Reg. 9,807, 9,809. The President, therefore, again expanded the Section 232 remedy to cover certain additional aluminum-intensive derivative articles. See id., 90 Fed. Reg. at 9,810-12.

Kodak is part of the U.S. aluminum industry's customer base, as it purchases 1XXX-series aluminum sheet to produce ALPPs. See supra section IV. This input is covered by the scope of the Department of Commerce's Aluminum Section 232 Report – within HTS heading 7606 ("Aluminum plates, sheets, and strip, of a thickness exceeding 0.2 mm") – and U.S. production of this input is "essential to U.S. national security." Aluminum Section 232 Report at 2, 20. As imports of ALPPs diminish Kodak's operations (see supra section V), it purchases less aluminum sheet for use in manufacturing ALPPs. While no U.S. manufacturer of aluminum sheet currently produces lithographic grade aluminum sheet, Kodak consumes significant volumes of such sheet annually and would welcome a U.S. supplier resuming production of lithographic grade aluminum sheet here in the United States. Indeed, when Kodak's production of ALPPs fell by **[ ]** square meters from 2020 to 2024 (see supra section V), the U.S. aluminum industry lost the opportunity to sell at least that amount of lithographic grade aluminum sheet to Kodak (and, frankly, an even greater volume given the volume of scrap generated in producing ALPPs). As such, imports of ALPPs rob the U.S. aluminum industry of the intended relief of the Section 232 remedy.

Moreover, Fujifilm and ECO3 (formerly Agfa) – Kodak's primary competitors in the ALPPs market – have moved their U.S. ALPP manufacturing operations offshore over the past eight years. Much of this production now occurs in China, where Fujifilm and ECO3 are able to source extremely low-priced and highly subsidized lithographic grade aluminum sheet that is then converted into ALPPs and dumped into the United States. Following the conversion of the lithographic grade aluminum sheet into ALPPs, Section 232 duties do not apply because ALPPs are not currently subject to Section 232 duties. With no current U.S. source for lithographic grade aluminum sheet, Kodak has been placed at a substantial competitive disadvantage relative to its foreign competitors, as Kodak sources lithographic grade aluminum sheet from Germany and the United Kingdom, but these imports of lithographic grade aluminum sheet are subject to Section 232 duties. Thus, Kodak – the sole remaining U.S. manufacturer of ALPPs –

pays Section 232 duties on its primary raw material input, but its competitors that supply the U.S. market from their operations in Brazil, China, Germany, and other countries do not currently pay Section 232 tariffs of the finished ALPPs that they manufacture abroad – often with Chinese-origin lithographic sheet – and ship to the United States.

A central objective of the Section 232 remedy is to reduce import penetration "to enable U.S. aluminum producers to utilize an average of 80 percent of their production capacity." Aluminum Section 232 Report at 107. President Trump, however, explained in Proclamation 10895 that this goal has not been met, stating:

> Domestic aluminum producers have been forced to idle additional production and shut down facilities. Two primary aluminum smelters within the United States have closed since Proclamation 9704 was promulgated. In addition, U.S. primary aluminum production decreased by 30 percent from 2020 to 2024, and U.S. smelter capacity utilization was only 52 percent in 2024.

90 Fed. Reg. 9,807, 9,808. This lagging capacity utilization is due, in part, to the "significant{}" increase in imports of derivative aluminum products (id., 90 Fed. Reg. at 9,809), including the surge in imports of ALPPs. See supra section V. Because imports of ALPPs, as well as other derivative articles, "prevent{} the domestic aluminum industry (including derivatives) from achieving sustained production capacity utilization of at least 80 percent, as determined in the Secretary's January 19, 2018, report," those imports undermine the aluminum Section 232 remedy's national security objectives. See 90 Fed. Reg. 9,807, 9,809. Accordingly, the Section 232 remedy should be expanded to include imports of ALPPs.

B. ALPPs Are Used In Printing Applications That Are a Critical National Security Function

ALPPs are widely used in offset printing applications. See **Exhibit 2** at 1-4. Printing, in turn, is identified as critical infrastructure by the U.S. Department of Homeland Security. See id. at 5-7;[9] see also id. at 8. Indeed, offset printing is part of the process used to print U.S.

[9] Cybersecurity and Infrastructure Security Agency. (2020, April 17). *Advisory memorandum on identification of essential critical infrastructure workers during COVID-19 response*. U.S.

(cont'd on next page)

currency (see id. at 9-11), as well as that for printing stamps. See id. at 12. Offset printing is also used by the Document Automations and Production Service ("DAPS") of the U.S. military (see id. at 13), and is used by Central Intelligence Agency's Imaging & Publishing Support division to print classified documents for all U.S. agencies. See id. at 14-15. In addition, ALPPs are used in printing newspapers, magazines, notices, and a range of other printed media that are critical to the dispersion of information to the American public.

Imports of ALPPs have already resulted in all U.S. producers of ALPPs other than Kodak shuttering their U.S. operations – resulting in the loss of hundreds of well-paying manufacturing jobs and leaving Kodak as the sole U.S. supplier of this article that, while small and inexpensive, is absolutely vital to the ability of printers to operate their offset presses. See Aluminum Lithographic Printing Plates from China and Japan, USITC Pub. 5559 (Nov. 2024) at 38.

VIII. CONCLUSION AND REQUEST FOR RELIEF

As the last remaining U.S. producer of ALPPs, it is crucial that Kodak continue to produce this vital input at its facility in Columbus, Georgia to ensure that the United States printing industry is not dependent on off-shore suppliers – particularly producers in China – to obtain the ALPPs needed to operate their printing presses. Absent Kodak's continued manufacture of ALPPs in the United States, our country will lose production of a crucial component in printing -- a critical infrastructure – that would undermine U.S. national security. Accordingly, the Section 232 remedy should be expanded to include imports of ALPPs.

IX. REQUEST FOR CONFIDENTIAL TREATMENT

Pursuant to 15 C.F.R. § 705.6(a)(2), Kodak requests confidential treatment of information enclosed in square brackets (**[ ]**) on pages 4, 5, and 8. The information contained on pages 4, 5, and 8 contains highly sensitive business confidential commercial and operational information including information on Kodak's production, capacity, and capacity utilization. This type of information is not available to the public and its release would cause substantial harm

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Department of Homeland Security (available at https://www.cisa.gov/sites/default/files/publications/Version_3.0_CISA_Guidance_on_Essential_Critical_Infrastructure_Workers_4.pdf) (accessed May 1, 2025).

to the competitive position of Kodak. This proprietary information is exempted from public disclosure by the Freedom of Information Act at 5 U.S.C. § 552(b)(4). This type of information is also the type treated as business confidential and exempted from public disclosure in trade remedy investigations, pursuant to 19 U.S.C. § 1677f(b). A public version of these comments with business confidential information redacted is being submitted concurrently with this business confidential version.

* * *

We appreciate the Bureau of Industry and Security's considerations of these comments. If we can be of assistance in providing any additional information that might be helpful to the agency's investigation, please do not hesitate to contact us.

Respectfully submitted,

Jim Continenza

Executive Chairman and Chief Executive Officer
Eastman Kodak Company

Attachments

Exhibit 1

U.S. General Imports of OTHER PLATES AND FILM, WITH ANY SIDE EXCEEDING 255 MM IN THE FLAT
HTS # 3701.30.0000
Annual 2020 - 2024

General First Unit of Quantity (square meters)

	2020	2021	2022	2023	2024	2020-2024 % change	2022-2023 % change	2023-2024 % change
Germany	11,856,835	15,446,542	15,050,162	11,936,667	12,728,299	7.3%	-20.7%	6.6%
Japan	5,054,546	5,451,299	14,721,850	14,320,994	11,661,638	130.7%	-2.7%	-18.6%
China	82,234	697,424	5,249,631	6,123,558	8,234,118	9913.0%	16.6%	34.5%
Brazil	70,227	112,939	252,671	210,297	937,013	1234.3%	-16.8%	345.6%
United Kingdom	1,222,435	682,820	786,011	527,869	616,950	-49.5%	-32.8%	16.9%
Australia		85	75	5,475	182,122		7200.0%	3226.4%
Belgium	114,695	75,040	77,880	152,936	165,032	43.9%	96.4%	7.9%
Taiwan	94,838	132,021	197,253	115,676	159,790	68.5%	-41.4%	38.1%
All others	3,111,664	2,542,307	4,485,087	815,845	155,198	-95.0%	-81.8%	-81.0%
Total	21,607,474	25,140,477	40,820,620	34,209,317	34,840,160	61.2%	-16.2%	1.8%

General Customs Value (USD)

	2020	2021	2022	2023	2024	2020-2024 % change	2022-2023 % change	2023-2024 % change
Germany	66,664,615	84,415,253	81,134,863	69,370,411	76,154,737	14.2%	-14.5%	9.8%
Japan	27,268,544	47,140,860	87,932,578	68,469,785	68,392,475	150.8%	-22.1%	-0.1%
China	408,846	2,605,157	17,471,668	21,799,244	26,196,867	6307.5%	24.8%	20.2%
Brazil	378,110	562,955	949,223	1,186,832	4,204,891	1012.1%	25.0%	254.3%
United Kingdom	1,358,216	2,218,535	4,183,381	1,831,554	1,893,486	39.4%	-56.2%	3.4%
Australia		16,185	11,840	439,418	326,217		3611.3%	-25.8%
Belgium	701,208	503,914	603,271	1,148,721	1,017,932	45.2%	90.4%	-11.4%
Taiwan	413,061	563,018	735,595	1,103,847	1,123,277	171.9%	50.1%	1.8%
All Others	15,380,979	13,443,412	28,793,834	6,322,913	686,426	-95.5%	-78.0%	-89.1%
Total	112,573,579	151,469,289	221,816,253	171,672,725	179,996,308	59.9%	-22.6%	4.8%

AUV (USD/square meter)

	2020	2021	2022	2023	2024	2020-2024 % change	2022-2023 % change	2023-2024 % change
Germany	5.62	5.46	5.39	5.81	5.98	6.4%	7.8%	3.0%
Japan	5.39	8.65	5.97	4.78	5.86	8.7%	-20.0%	22.7%
China	4.97	3.74	3.33	3.56	3.18	-36.0%	7.0%	-10.6%
Brazil	5.38	4.98	3.76	5.64	4.49	-16.7%	50.2%	-20.5%
United Kingdom	1.11	3.25	5.32	3.47	3.07	176.2%	-34.8%	-11.5%
Australia		190.41	157.87	80.26	1.79		-49.2%	-97.8%
Belgium	6.11	6.72	7.75	7.51	6.17	0.9%	-3.0%	-17.9%
Taiwan	4.36	4.26	3.73	9.54	7.03	61.4%	155.9%	-26.3%
All Others	4.94	5.29	6.42	7.75	4.42	-10.5%	20.7%	-42.9%
Total	5.21	6.02	5.43	5.02	5.17	-0.8%	-7.6%	3.0%

Source: Official Import Statistics, from USITC Dataweb

Exhibit 2

Printing plates might seem simple, but they're central to the print world. These thin metal sheets, often aluminum, are used to transfer text and images onto products like business cards, brochures, and catalogs. You might not notice them in action, but they're critical for getting vibrant colors and crisp lines onto paper.

How do they do it? By carrying your digital design, etched into the plate, so the press can apply the exact amount of ink in the right places. It's a straightforward idea with a big impact on the prints you see around you every day.

Let's explore.

THE ROLE OF PRINTING PLATES IN OFFSET PRINTING

Offset printing is popular for large print runs. Think of thousands of catalogs that need consistent color from the first copy to the last. Each color in your design gets its own plate, so if you're printing a four-color job (cyan, magenta, yellow, and black), you'll have four plates ready to go.

The plates are secured on rotating cylinders inside the press. As it runs, water keeps the areas that shouldn't print from holding ink, while the etched design grabs the ink and then presses it onto a rubber blanket. That blanket, in turn, presses the image onto the paper. It might sound a bit roundabout, but it gives you sharp and detailed results again and again.

THE PROCESS OF OFFSET PRINTING

Offset printing primarily depends on printing plates to transfer your design onto paper. It's a fascinating process where science meets art.

In this process, the ink and water interact with the printing plate so that the ink adheres only to the areas where your design is etched, while the rest of the plate is kept ink-free by a thin film of water. This enables the plates to deliver the design precisely onto the paper.

HOW ARE THE PLATES FOR OFFSET PRINTING?

March 10, 2022

-

News

colour offset
offset printing
printing plates

The premium quality offered by offset technology starts with the preparation of the aluminium plates where the original image is to be transferred

One of the reasons **why offset technology provides such high quality** is because of the **plates onto which the image is transferred,** and then printed on the substrate. This is an **indirect printing system**, as the substrate does not come into contact with the plates; the image transfer is carried out by means of rollers, thanks to the chemical treatment to which the matrix plate is subjected. Let's get to know this process:

Offset printing is monochrome; each plate only transfers ink of one colour, so **to print an original four-colour image, four plates are needed**: one for cyan, one for magenta, one for yellow, and the plate that will transfer the black (**CMYK** colour process). This process provides a colour rendering very close to the actual image. You can also follow the **Pantone model**, which offers a very wide range of shades. **Each colour is identified with a code** and can be transferred to the plate so that the print reproduces it exactly. In this case, you do not have to prepare four plates, but as many as you need to reproduce each Pantone colour.

How are offset printing plates made?

The plates consist of a base and an emulsion. The base can be made of various materials, but the most common is **aluminium**, because it offers an optimum combination of quality, strength, and malleability. The emulsion is a **very thin, lipophilic, photosensitive layer**, i.e. it retains the ink.

During the plate manufacturing process, the aluminium is subjected to physical and chemical treatments that give it the necessary qualities to transfer the images to the printing rollers. These treatments include **graining,** which is currently usually carried out by **anodising,** an electrochemical treatment with subsequent oxidation. In this way, among other things, the plate can retain the water in the hydrophilic areas, where the ink must not adhere.

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Offset printing technology | Offset lithography

Offset printing technology is preferred method for printing materials providing lower per-unit costs with the quality for larger print runs.

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Everything You Need to Know About Offset Printing Plates

Printing plates must have ability to transfer an image to paper, cardboard or other substrates.

Printing plates are usually made from metal, plastic, rubber, paper, and other materials.

The image is put on the printing plates with photochemical, photomechanical or laser engraving processes.

Usually, metal printing plates are more expensive but last longer and have greater accuracy.

The *offset printing plates* used in offset printing are thin (up to about 0.3 mm), and easy to mount on the plate cylinder, and they mostly have a mono-metal (aluminum) or, less often, multimetal, plastic or paper construction.

Aluminum has been gaining ground for a long time among the metal-based plates over zinc and steel.

The necessary graining of the aluminum surface is done mechanically either by sand-blasting, ball graining, or by wet or dry brushing.

Nowadays, practically all printing plates are grained in an electrolytic process (anodizing), that is, electrochemical graining with subsequent oxidation.

What Are Printing Plates?

TOPICS: Brochures Business Cards Catalogs Envelopes

POSTED BY: RAFAEL RIVERA AUGUST 22, 2017

Printing plates are thin, flat sheets of metal commonly made from **aluminum**. They are used in printing products like business cards, catalogs, and brochures.

Printing Plates in Offset Printing

The term "printing plate" is often mentioned in the same breath as offset printing. Offset printing was the standard before the birth of digital printers — and some prefer offset printing to this day. The same is true for us here at PrintRunner as the majority of our products like business cards, brochures, envelopes, and catalogs are printed through offset printing.

Offset printing works by transferring an image onto a metal sheet known as printing plates through a photomechanical or photochemical process. Typically, there is one plate for every color in the design to be printed. Once done, the plates are attached to cylindrical plate holders where ink and water are applied as the paper material passes through.

Offset printing relies on the use of printing plates to transfer your design onto paper.

hospitals, long-term care facilities, inpatient hospice, ambulatory surgical centers, etc.).
    - Outpatient care workers (e.g. end-stage-renal disease, Federally Qualified Health Centers, Rural Health Clinics, community mental health clinics, organ transplant/procurement centers, and other ambulatory care settings/providers, comprehensive outpatient rehabilitation facilities, etc.).
    - Home care workers (e.g. home health care, at-home hospice, home dialysis, home infusion, etc.).
    - Workers at Long-term care facilities, residential and community-based providers (e.g. Programs of All-Inclusive Care for the Elderly (PACE), Intermediate Care Facilities for Individuals with Intellectual Disabilities, Psychiatric Residential Treatment Facilities, Religious Nonmedical Health Care Institutions, etc.).
    - Workplace safety workers (i.e., workers who anticipate, recognize, evaluate, and control workplace conditions that may cause workers' illness or injury).
- Workers needed to support transportation to and from healthcare facility and provider appointments.
- Workers needed to provide laundry services, food services, reprocessing of medical equipment, and waste management.
- Workers that manage health plans, billing, and health information and who cannot work remotely.
- Workers performing cybersecurity functions at healthcare and public health facilities and who cannot work remotely.
- Workers performing security, incident management, and emergency operations functions at or on behalf of healthcare entities including healthcare coalitions, who cannot practically work remotely.
- Childcare, eldercare, and other service providers for essential healthcare personnel.
- Vendors and suppliers (e.g. imaging, pharmacy, oxygen services, durable medical equipment, etc.).
- Workers at manufacturers (including biotechnology companies and those companies that have shifted production to medical supplies), materials and parts suppliers, technicians, logistics and warehouse operators, printers, packagers, distributors of medical products and equipment (including third party logistics providers, and those who test and repair), personal protective equipment (PPE), isolation barriers, medical gases, pharmaceuticals (including materials used in radioactive drugs), dietary supplements, blood and blood products, vaccines, testing materials, laboratory supplies, cleaning, sanitizing, disinfecting or sterilization supplies (including dispensers), sanitary goods, personal care products, pest control products, and tissue and paper towel products.
- Donors of blood, bone marrow, blood stem cell, or plasma, and the workers of the organizations that operate and manage related activities.
- Pharmacy staff, including workers necessary to maintain uninterrupted prescription, and other workers for pharmacy operations.
- Workers in retail facilities specializing in medical good and supplies.
- Public health and environmental health workers, such as:
    - Workers specializing in environmental health that focus on implementing environmental controls, sanitary and infection control interventions, healthcare facility safety and emergency preparedness planning, engineered work practices, and developing guidance and protocols for appropriate PPE to prevent COVID-19 disease transmission.
    - Public health/ community health workers (including call center workers) who conduct community-based public health functions, conducting epidemiologic surveillance and compiling, analyzing, and communicating public health information, who cannot work remotely.
- Human services providers, especially for at risk populations such as:
    - Home delivered meal providers for older adults, people with disabilities, and others with chronic

- Automotive repair, maintenance, and transportation equipment manufacturing and distribution facilities (including those who repair and maintain electric vehicle charging stations).
- Transportation safety inspectors, including hazardous material inspectors and accident investigator inspectors.
- Manufacturers and distributors (to include service centers and related operations) of lighting and communication systems, specialized signage and structural systems, emergency response equipment and support materials, printers, printed materials, packaging materials, pallets, crates, containers, and other supplies needed to support manufacturing, packaging staging and distribution operations, and other critical infrastructure needs.
- Postal Service, parcel, courier, last-mile delivery, and shipping and related workers, to include private companies, who accept, process, transport, and deliver information and goods.
- Workers who supply equipment and materials for maintenance of transportation equipment.
- Workers who repair and maintain vehicles, aircraft, rail equipment, marine vessels, bicycles, and the equipment and infrastructure that enables operations that encompass movement of cargo and passengers.
- Workers who support air transportation for cargo and passengers, including operation distribution, maintenance, and sanitation. This includes air traffic controllers, flight dispatchers, maintenance personnel, ramp workers, fueling agents, flight crews, airport safety inspectors and engineers, airport operations personnel, aviation and aerospace safety workers, security, commercial space personnel, operations personnel, accident investigators, flight instructors, and other on- and off-airport facilities workers.
- Workers supporting transportation via inland waterways, such as barge crew, dredging crew, and river port workers for essential goods.
- Workers critical to the manufacturing, distribution, sales, rental, leasing, repair, and maintenance of vehicles and other transportation equipment (including electric vehicle charging stations) and the supply chains that enable these operations to facilitate continuity of travel-related operations for essential workers.
- Warehouse operators, including vendors and support personnel critical for business continuity (including heating, ventilation, and air conditioning (HVAC) and electrical engineers, security personnel, and janitorial staff), e-commerce or online commerce, and customer service for essential functions.

PUBLIC WORKS AND INFRASTRUCTURE SUPPORT SERVICES

- Workers who support the construction, maintenance, or rehabilitation of critical infrastructure.
- Workers supporting construction materials production, testing laboratories, material delivery services, and construction inspection.
- Workers who support the operation, inspection, and maintenance of essential public works facilities and operations, including bridges, water and sewer main breaks, fleet maintenance personnel, construction of critical or strategic infrastructure, traffic signal maintenance, emergency location services for buried utilities, maintenance of digital systems infrastructure supporting public works operations, and other emergent issues.
- Workers such as plumbers, electricians, exterminators, builders (including building and insulation), contractors, HVAC Technicians, landscapers, and other service providers who provide services, including temporary construction, that are necessary to maintaining the safety, sanitation, and essential operation

- Elections personnel to include both public and private sector elections support.
- Workers supporting the operations of the judicial system, including judges, lawyers, and others providing legal assistance.
- Workers who support administration and delivery of unemployment insurance programs, income maintenance, employment service, disaster assistance, workers' compensation insurance and benefits programs, and pandemic assistance.
- Federal, State, and Local, Tribal, and Territorial government workers who support Mission Essential Functions and communications networks.
- Trade Officials (FTA negotiators; international data flow administrators).
- Workers who support radio, print, internet and television news and media services, including, but not limited to front line news reporters, studio, and technicians for newsgathering, reporting, and publishing news.
- Workers supporting Census 2020.
- Weather forecasters.
- Clergy for essential support.
- Workers who maintain digital systems infrastructure supporting other critical government operations.
- Workers who support necessary permitting, credentialing, vetting, and licensing for essential critical infrastructure workers and their operations.
- Customs and immigration workers who are critical to facilitating trade in support of the national emergency response supply chain.
- Educators supporting public and private K-12 schools, colleges, and universities for purposes of facilitating distance learning or performing other essential functions.
- Workers at testing centers for emergency medical services and other healthcare workers.
- Staff at government offices who perform title search, notary, and recording services in support of mortgage and real estate services and transactions.
- Residential and commercial real estate services, including settlement services.
- Workers supporting essential maintenance, manufacturing, design, operation, inspection, security, and construction for essential products, services, supply chain, and COVID-19 relief efforts.
- Workers performing services to animals in human care, including zoos and aquariums.

CRITICAL MANUFACTURING

- Workers necessary for the manufacturing of metals (including steel and aluminum), industrial minerals, semiconductors, materials and products needed for medical supply chains and for supply chains associated with transportation, aerospace, energy, communications, information technology, food and agriculture, chemical manufacturing, nuclear facilities, wood products, commodities used as fuel for power generation facilities, the operation of dams, water and wastewater treatment, processing and reprocessing of solid waste, emergency services, and the defense industrial base. Additionally, workers needed to maintain the continuity of these manufacturing functions and associated supply chains, and workers necessary to maintain a manufacturing operation in warm standby.
- Workers necessary for the manufacturing of materials and products needed to manufacture medical equipment and PPE.
- Workers necessary for mining and production of critical minerals, materials and associated essential supply chains, and workers engaged in the manufacture and maintenance of equipment and other

Print Added as Essential Workplace

Apr 17, 2020

Printers Added to Essential Critical Infrastructure Workers by Cyber Security and Infrastructure Agency

Pittsburgh, PA--Printers and packagers have been specifically included as essential workers in the updated Guidance on the Essential Critical Infrastructure Workforce by the United States Department of Homeland Security's Cyber Security and Infrastructure Agency (CISA) released on April 17, 2020. Printing Industries of America (PIA) petitioned the agency to recognize printing and packaging's essential nature along with the myriad of printed materials necessary to support the nation's other critical infrastructure sectors during the COVID-19 pandemic.

Over 40 states and numerous localities have enacted stay-at-home orders, many of which direct closures of non-essential businesses. While CISA's guidance is not law nor a binding government regulation, it serves as an important benchmark by providing a standard definition of essential workers and encourages adoption by governors, county officials, and mayors. CISA estimates that approximately 75 percent of states have adopted its guidelines to create a more harmonious approach to determining which types of businesses remain open.

Earlier versions of the CISA guidance implied printing and packaging companies were essential as part of critical manufacturing supply chains, but absent an explicit definition, PIA member companies have faced confusion or work stoppages as individual states and municipalities issued a patchwork of stay-at-home orders. In several cases, print was excluded by certain states and the industry was forced to petition governors to amend the original order. This process has created havoc for the industry, its employees, and customers.

"From the onset of this pandemic, PIA's member companies have sought to strike a delicate balance between remaining operational to support other critical infrastructure sectors while protecting public health and ensuring workplace safety," said Michael Makin, President & CEO of Printing Industries of America. "The CISA guidance will help ensure that the 700,000 print and packaging workers in supply chains supporting critical manufacturing sectors can remain an essential part of the American workforce."

"On behalf of PIA, the leading trade association representing the printing, packaging, mailing, and graphic communications industries, I would like to thank CISA for its extensive stakeholder outreach and collaboration during this unprecedented and tense time," said Makin. "America relies on print in times of national emergency, and print will proudly support our nation's infrastructure and economy as we look hopefully toward recovery."`

The Bureau of Engraving & Printing BEP

The Buck Starts Here: How Money is Made

Currency production is not an easy or simple task, but one that involves precision, highly trained and skilled craftspeople, specialized equipment and a combination of traditional, old world printing techniques merged with sophisticated, cutting edge technology.

Since 1862, BEP been entrusted with the mission of manufacturing the nation's currency. All U.S. currency is printed at our facility in Washington, D.C. and at our facility in Fort Worth, Texas. In addition to manufacturing U.S. paper currency, BEP also prints a variety of U.S. government security documents.

Designing and Engraving

The design starts with ideas and rough sketches from our banknote designers, who develop the overall look, layout and artistic details. They work closely with engravers, who use a combination of traditional and modern techniques to engrave the portrait on the front, the vignette on the back, the ornamentation, and the lettering. Each engraving consists of numerous detailed fine lines, dots and dashes that vary in size and shape.

The magnificent artistry and skill of the engraver brings the portrait to life with an array of traditional tools and cutting-edge digital technology.

The intricate carvings and etchings that we see every day on our paper currency are engraved into a network of fine lines and grooves into steel dies that are transferred and processed to create working printing plates. After careful inspection and minor repair if needed, these plates are cleaned and polished. The working plate is chrome-plated for hardness and is then ready to go on the printing press.

Ink and Paper

All notes, regardless of denomination, use green ink on the backs. Faces, on the other hand, use a combination of black ink, color-shifting ink in the lower right-hand corner for the $10 denominations and higher, and metallic ink for the freedom icons on redesigned $10, $20 and $50 bills. The $100 note's "bell in the inkwell" freedom icon uses color-shifting ink. These and the other inks appearing on U.S. currency are specially formulated and blended by BEP. Inks headed for BEP presses undergo continual quality testing.

A fancy word for paper in the currency business is substrate. U.S. currency paper is composed of 25% linen and 75% cotton, with red and blue fibers distributed randomly throughout to make imitation more difficult. The paper is made specifically for the Bureau of Engraving and Printing by Crane Currency in Dalton, Massachusetts and it is illegal for anyone other than BEP to possess this paper. Paper for the $5 bill and above is made with specific watermarks and security threads. While the percentage of counterfeit notes in circulation remains small, there are ever evolving new techniques that we need to stay ahead of.

Offset Printing

Currency printing is built on the principal of layering each printing process on the substrate. Each print technology has a unique fingerprint on how the ink transfers from the plate, the inks they use and how it lays on the substrate, thereby building security into the currency with every production step.

The first step is adding color through offset printing. To accomplish this, BEP has three offset printing presses in D.C., and four in our Texas facility. On this press, the face and back of the sheet is printed at the same time. All denominations, excluding the $1 and $2 notes, are printed in offset first, where detailed background images using unique colors are blended together as they are added to “blank” currency sheets.

The background colors are then printed by state-of-the-art, high speed, sheet-fed, presses. These massive machines are more than 50 feet long and weigh more than 70 tons capable of reaching speeds of 10,000 sheets per hour. In addition to online computer inspection, press operators will pull a sheet after every 500 impressions (approximately), and carefully examine it to ensure that the colors and alignment (which we call “registration”) remain consistent to our rigorous quality standards.

Intaglio – (also called Plate Printing or Steel Plate Printing)

Intaglio is the next layer of the printing process for the denominations that went through offset, and the first stage of printing for the $1 and the $2 notes. Here, ink is applied to the engraved plate. The excess ink is removed from the non-image area of the plate, thereby leaving ink only in the engraved recessed areas. Paper is then laid on top of the plate, and the two are pressed together under great pressure. As a result, the ink from the recessed areas is pulled onto the paper, creating a slightly raised finished image. When dried, the tactility feels like fine sandpaper. Intaglio printing is very specialized and used on high value negotiable documents like currency and portions of passports. Intaglio is used for the portraits, vignettes, scrollwork, numerals and lettering that is unique to each denomination.

BEP’s intaglio presses have the latest technology to ensure the highest of quality and security of U.S. currency. The presses each weigh 57 tons and print with up to 20 tons of pressure. They can produce at speeds of 10,000 sheets per hour and can produce 32 or 50 notes per sheet.

The intaglio presses first print the back of the currency sheets in green ink. The sheets are then taken to a vault to dry for three days. A common work-in-process vault might contain $50 to $100 million of notes at any one time, depending on the denomination being printed. After the ink on the paper is dry, the faces of the notes are printed with black ink. The notes will dry again for another three days before going on to the next phase of production. At any given moment within the Washington, D.C. facility, for instance, there may be up to $300 million dollars in various phases of production.

Offline Currency Inspection System (OCIS)

To ensure only the highest quality sheets move to the numbering operation, sheets are thoroughly examined using OCIS, a state-of-the-art computer system integrated with cameras and sophisticated custom-built software to divide each note into 125,000 pixels or 4,000,000 pixels for the entire sheet at a speed of 2½ sheets per second. OCIS completely

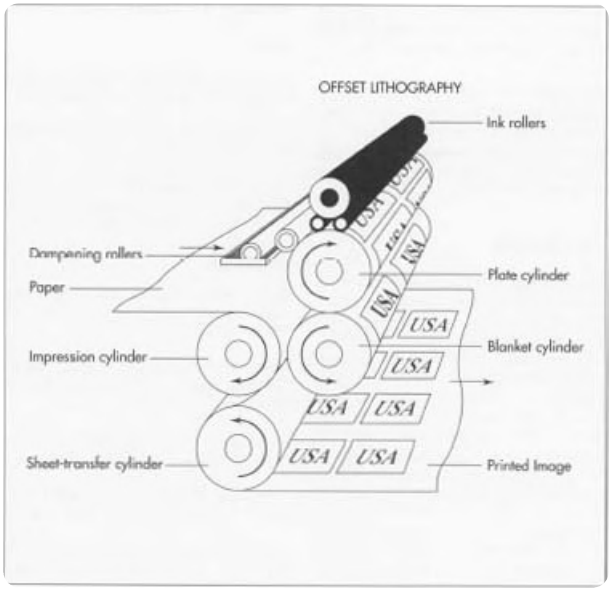
- 6 If more than one color is involved, separate colors are handled by a process known as *selective inking. A* particular color of ink is applied by a piece of hard rubber that comes in contact with only the section of the stamp that is to receive that color. After the ink is applied in one area, another piece of rubber, with another color for another area, is used to ink another portion of the plate.

Offset lithography

- 7 The offset method of printing is less expensive than intaglio and can also produce very fine results, and it is a common choice for many stamps. In this method, a picture or design is first made photochemically (/knowledge/Photochemistry.html) on an aluminum plate. Once attached to the printing press, the plate is alternately bathed in ink and water: the photochemical image gets ink, while the non-image parts are dampened with water, which acts as a repellent to the ink and ensures that only the image will be transferred to the paper. Next, the plate presses against a rubber "blanket," which carries a reverse image of the final picture. In turn, the rubber blanket contacts the paper, producing the final positive image.

Perforation

- 8 Perforations can be made either during the printing process by an adjacent machine or, less commonly, by a separate machine afterwards. In the first method, the sheet of paper is passed through a machine which uses little pins to punch the perforation holes through the paper in a horizontal and vertical grid. After pushing through the paper, the pins meet a matching metal indentation on the other side. After being perforated, the stamps move out of the press. In the other method of producing perforations, called *rouletting,* a wheel similar to a pizza cutter but with pins is rolled across one side of the stamped paper after it has been removed from the printing press, laying down a row of holes. Though originally a hand-operation, this method of perforation is now automated.



In offset lithography, a picture or design is first made photochemically on an aluminum plate. Once attached to the printing press, the plate is alternately bathed in ink and water: the photochemical image gets ink, while the non-image parts are dampened with water, which acts as a repellent to the ink and ensures that only the image will be transferred to the paper. Next, the plate presses against a rubber 'blanket,' which carries a reverse image of the final picture. In turn, the rubber blanket contacts the paper, producing the final positive image.

Quality Control

Stamps are inspected at every stage of the printing process, by the people who are running the stamps and by inspectors whose only responsibility is to observe the process and remove errors before the stamps proceed to the next step.

Printing machines are hugely complex, and errors in the printing process are a fact of life. Misfed paper, clogged inking apparatus, variations in pressure, changes in ink quality, incorrectly adjusted mechanisms, and a host of other problems can be minimized but not always eliminated. Even changes in the humidity of the pressroom can affect the press and the paper enough to produce less-than-perfect results.

EGLIN AIR FORCE BASE

DAPS more than just a "Print shop"

Published May 29, 2009

By Samuel King Jr.

Team Eglin Public Affairs

EGLIN AIR FORCE BASE, Fla. -- Serving the Department of Defense for more than 60 years, the Document Automation and Production Service offers much more than printing.

"DAPS provides a full portfolio of best-value document services ranging from traditional offset printing, through on-demand output, to online document services," said Ray Ward, DAPS representative. "It is the catalyst for document automation in the DOD by actively functioning as a transformation agent to move the department toward the use of online documents and services."

Sometimes referred to as the "DOD's printer" or the "quick copy guys," it actually is a global business.

DAPS currently manages more than 190 production facilities, primarily located on U.S. military bases world-wide. DAPS leverages the capabilities of the industry by outsourcing nearly 70 percent of the DOD's document requirements through commercial service contracts, some of which are through the Government Printing Office.

The multitude of DAPS services include the building of libraries of digital documents allowing for online access, the provision of multifunctional devices (that print from networks, copy, fax, and scan) in customer workspaces, and the conversion of paper documents to standard digital formats.

"One of our unique services is distribute and print," said Mr. Ward. "A digital document can be sent to one or more sites for printing on location. The job can be picked up or delivered to the customer. It's fast, convenient and saves considerable shipping costs."

DAPS is located on Eglin AFB, at 302 W Georgia Ave, Ste 1 Bldg 10

PRODUCTION INKJET, WIDE-FORMAT PRINTING

April 28, 2016

The CIA: Printing the Nation's Secrets

No in-plant keeps its documents more secure than the CIA's Imaging & Publishing Support operation, which is trusted to print top secret government intelligence data for the country's leaders.

The CIA seal in the lobby of the agency's headquarters facility.

By **Bob Neubauer**

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One of the most important missions of every in-plant is to maintain the confidentiality of its parent organization's documents. It's safe to say that no in-plant has a greater need for document security than the Central Intelligence Agency's Imaging & Publishing Support (IPS) division.

CIA Imaging & Publishing Support uses a five-color, 40″ manroland offset press with a coater to print its long-run products. Here, a press operator pulls a sample from the delivery end of the press.

Deep inside the CIA's highly secure Langley, Va., headquarters, the U.S government's foreign intelligence gathering service maintains a very large in-plant to handle printing, graphic design, web services and more in support of its mission to gather, process and analyze national security information from around the world for U.S. policy makers.

"We're the intelligence community publisher," notes Warren (last name withheld for security reasons), chief of IPS. "The agency [provides] fast-breaking information to policy makers, so we have quick turnaround times."

The CIA has had printing capabilities right from its inception in 1947. With a mix of offset and digital equipment, the CIA's in-plant uses a five-color, 40″ manroland offset press with a coater to print its long-run products, such as brochures or recruitment posters. Shorter-

a new HP Latex 370. In the bindery, IPS is about to enhance its perfect binding capabilities with a new Spiel Sterling Digibinder.

Related story: Printing Secrets At The CIA

Many of the items IPS prints are common to in-plants: invitations, certificates, memos, flyers, posters, brochures, training manuals, business cards — though some of these can include classified data. Other items are more unique, such as "Studies in Intelligence" books in which CIA historians study how procedures were done in the past and offer leadership lessons for the future.

The Government's Classified Printer

IPS prints classified documents not just for the CIA but for all intelligence agencies and any agency with a need for classified material. For example, every government agency has to produce a Congressional Budget Justification Book (CBJB) for the Office of Management and Budget, so IPS handles these projects for them.

"We really provide classified printing services for any U.S. government agency that needs to print classified," affirms Warren.

Providing high-security printing means having a staff you can trust and a facility with secure, limited access. Both are areas where the CIA excels.

"To have access to our building, you have to have a top secret security clearance, so it's a highly restricted area," points out Warren. Employees receive in-depth training on classification issues, he says, and security is part of the culture at the CIA.

"We have an office of security that ensures a trusted workforce," Warren says.

Installing a wall wrap.

Offline Environment

To prevent digital intrusion, none of the shop's printers or other systems is connected to the Internet. The intelligence community uses its own internal communication system.

This makes it impossible to use a traditional Web-to-print system in the in-plant, so job files arrive in various electronic formats through the CIA's secure electronic intelligence network. Warren says IPS is actively developing an internal Web-to-print capability.