PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XEROX CORPORATION	08/11/2023

RECEIVING PARTY DATA

Name:	ELEM ADDITIVE LLC
Street Address:	11000 WESTON PKWY
City:	CARY
State/Country:	NORTH CAROLINA
Postal Code:	27513

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17060600

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ATTORNEY DOCKET NUMBER:	0474.0675
NAME OF SUBMITTER:	DOREEN SASAKI
SIGNATURE:	/DOREEN SASAKI/
DATE SIGNED:	10/25/2023

Total Attachments: 34
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Patent Assignment Agreement

WHEREAS Xerox Corporation, a corporation incorporated under the laws of New York ("***Assignor***") agreed to assign or cause to be assigned to Elem Additive LLC, a corporation organized under the laws of Delaware ("***Assignee***") all of Assignor's right, title and interest in and to the patent rights listed on Exhibit A1 hereto (the "***Assigned Patents***").

NOW, THEREFORE, for good and valuable consideration, receipt and sufficiency of which are hereby acknowledged, effective as of August 11, 2023 (the "***Effective Date***"):

1. Assignor hereby grants, conveys and assigns to Assignee all its right, title and interest in and to (a) Assigned Patents and the inventions and improvements disclosed therein; (b) all reissues, divisionals, continuations, extensions, renewals, reexaminations and foreign counterparts thereof; and (c) all patents and applications which claim priority to or have common priority with any such patents or patent applications, or are linked with any such patents or patent applications by terminal disclaimer.

2. Assignor further grants, conveys and assigns to Assignee all its right, title and interest in and to any and all proceeds, causes of action and rights of recovery for past and future infringement or misappropriation of any of the Assigned Patents.

3. Assignor further grants, conveys and assigns to Assignee all its right, title and interest in and to any and all rights of Assignor to obtain reissues, re-examinations, continuations, continuations-in-part, divisions, extensions or other legal protections arising solely from the Assigned Patents that are or may be secured in any relevant jurisdiction anywhere in the world, including but not limited to the United States, its territories and possessions, as of the Effective Date or hereinafter in effect.

4. The Assigned Patents are conveyed subject to any and all licenses, permissions, consents or other rights that may have been granted by Assignor or its predecessors-in-interest with respect thereto prior to the Effective Date, or by Assignee to Assignor as of the Effective Date.

5. Assignor agrees that Assignee shall have the right to file or record this Patent Assignment with the United States Patent and Trademark Office or other such entities throughout the world, and Assignor authorizes and requests the relevant authorities to record Assignee as the assignee and owner of the Assigned Patents. Assignor shall execute and deliver to Assignee such documents and take such actions as requested by Assignee to register, evidence or perfect Assignee's rights under this Patent Assignment. In addition, Assignor hereby irrevocably designates and appoints Assignee and its duly authorized officers and agents as its agents and attorneys in fact, to act for and on their behalf and stead to execute and file any such documents and to do all other lawfully permitted acts to

register, evidence or perfect Assignee's rights under this Patent Assignment with the same legal force and effect as if executed by Assignor. This includes, but is not limited to, the power to insert on this Patent Assignment any further identification that may be necessary to comply with the rules of the United States Patent and Trademark Office, or rules of other entities throughout the world, for recordation of this document.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned Assignor has caused this Patent Assignment to be executed by its authorized representative.

XEROX CORPORATION,

By

John G Bruno (Aug 11, 2023 08:35 EDT)

Name: John Bruno
Date: President and Chief Operating Officer

[Signature Page to Patent Assignment Agreement]

Exhibit A (Assigned Patents)

[See attached.]

Transferred Patents and Transferred IDs

Transferred Utility Patents and Transferred IDs

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20190066US01	**United States of America**	**Granted**	**CONDUCTIVE LIQUID THREE DIMENSIONAL PRINTER**	**14/228681**	**20150273577**	**9616494**	**Alloy Acquisition Corp. LLC**
20190066US02	**United States of America**	**Granted**	**CONDUCTIVE LIQUID THREE DIMENSIONAL PRINTER**	**15/457586**	**2017-0182553**	**10040119**	**Alloy Acquisition Corp. LLC**
20190068US02	**United States of America**	**Granted**	**METAL POWDER MANUFACTURE USING A LIQUID METAL EJECTOR**	**16/412801**	**2019-0351488**	**11607727**	**XEROX CORPORATION**
20190138US02	**United States of America**	**Granted**	**METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO COMPENSATE FOR GEOMETRIC VARIATIONS THAT OCCUR DURING AN ADDITIVE MANUFACTURING PROCESS**	**16/845312**	**2020-0324486**	**11565475**	**XEROX CORPORATION**
20190139US02	**United States of America**	**Published**	**NOZZLE CLEANING IN JETTING OF METAL ALLOYS**	**16/844524**	**2020-0324341**		**XEROX CORPORATION**
20190378US01	**United States of America**	**Granted**	**A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING**	**16/808266**	**2021-0276081**	**11358215**	**XEROX CORPORATION**
20190378CN01	China	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	202110138853.1	CN113414403 A		XEROX CORPORATION
20190378JP01	Japan	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	2021-013236	2021-138136		XEROX CORPORATION
20190378EP01	European Patent	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	21157957.8	3875188		XEROX CORPORATION
20190378KR01	Korea, Republic of (KR)	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	10-2021-0017941	10-2021-0111675		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20190403US01	**United States of America**	**Granted**	**A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING**	**16/808285**	**2021-0276082**	**11260449**	**XEROX CORPORATION**
20190403CN01	China	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	202110136701.8	113333776		XEROX CORPORATION
20190403JP01	Japan	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	2021-013083	2021-138135		XEROX CORPORATION
20190403EP01	European Patent	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	21157968.5	3875189		XEROX CORPORATION
20190403KR01	Korea, Republic of (KR)	Published	A THREE-DIMENSIONAL PRINTING SYSTEM AND METHOD OF THREE-DIMENSIONAL PRINTING	10-2021-0017942	10-2021-0111676		XEROX CORPORATION
20190413US02	**United States of America**	**Granted**	**ATMOSPHERE AND PART FORMATION IN A LIQUID METAL DROP-ON-DEMAND PRINTER**	**16/991159**	**2021-0046541**	**11607724**	**XEROX CORPORATION**
20190413US03	**United States of America**	**Published**	**ATMOSPHERE AND PART FORMATION IN A LIQUID METAL DROP-ON-DEMAND PRINTER**	**18/166104**			**XEROX CORPORATION**
20190455US01	**United States of America**	**Granted**	**VENTURI INLET PRINTHEAD**	**16/712725**	**2021-0178751**	**11220102**	**XEROX CORPORATION**
20190455CN01	China	Allowed	VENTURI INLET PRINTHEAD	202011238458.2	CN112976810A		XEROX CORPORATION
20190455JP01	Japan	Published	VENTURI INLET PRINTHEAD	2020-192843	2021-094849		XEROX CORPORATION
20190455KR01	Korea, Republic of (KR)	Published	VENTURI INLET PRINTHEAD	10-2020-0157668	10-2021-0075003		XEROX CORPORATION
20190464US01	**United States of America**	**Granted**	**GAS EXPANSION MATERIAL JETTING ACTUATOR**	**16/712618**	**2021-0178763**	**11440321**	**XEROX CORPORATION**
20190464CN01	China	Published	GAS EXPANSION MATERIAL JETTING ACTUATOR	202011237185.X	CN112976809A		XEROX CORPORATION
20190464JP01	Japan	Published	GAS EXPANSION MATERIAL JETTING ACTUATOR	2020-192811	2021-095634		XEROX CORPORATION
20190464EP01	European Patent	Published	GAS EXPANSION MATERIAL JETTING ACTUATOR	20210488.1	3835068		XEROX CORPORATION
20190464KR01	Korea, Republic of (KR)	Published	GAS EXPANSION MATERIAL JETTING ACTUATOR	10-2020-0157669	10-2021-0075004		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20190503US01	**United States of America**	**Allowed**	**SURFACE TREATED ADDITIVE MANUFACTURING PRINTHEAD NOZZLES AND METHODS FOR THE SAME**	**17/017392**	**2021-0069972**		**XEROX CORPORATION**
20190503US02	**United States of America**	**Published**	**SURFACE TREATED ADDITIVE MANUFACTURING PRINTHEAD NOZZLES AND METHODS FOR THE SAME**	**17/017447**	**2021-0069778**		**XEROX CORPORATION**
20190579US01	**United States of America**	**Granted**	**METHOD AND SYSTEM FOR OPERATING A MODULAR HEATER TO IMPROVE LAYER BONDING IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**16/816853**	**2021-0283853**	**11485089**	**XEROX CORPORATION**
20190579CN01	China	Allowed	METHOD AND SYSTEM FOR OPERATING A MODULAR HEATER TO IMPROVE LAYER BONDING IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	202110173247.3	CN113458414A		XEROX CORPORATION
20190579JP01	Japan	Published	METHOD AND SYSTEM FOR OPERATING A MODULAR HEATER TO IMPROVE LAYER BONDING IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	2021-025207	2021-143420		XEROX CORPORATION
20190579EP01	European Patent	Published	METHOD AND SYSTEM FOR OPERATING A MODULAR HEATER TO IMPROVE LAYER BONDING IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	21159105.2	3878581		XEROX CORPORATION
20190579KR01	Korea, Republic of (KR)	Published	METHOD AND SYSTEM FOR OPERATING A MODULAR HEATER TO IMPROVE LAYER BONDING IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	10-2021-0022258	10-2021-0116231		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20190840US01	**United States of America**	**Granted**	**SYSTEM AND METHOD FOR DETERMINING A TEMPERATURE OF AN OBJECT**	**16/903813**	**2021-0394448**	**11478991**	**XEROX CORPORATION**
20190840US02	**United States of America**	**Granted**	**AN OBJECT PRINTED BY A 3D PRINTER AND A METHOD FOR DETERMINING THE TEMPERATURE OF THE OBJECT**	**16/903835**	**2021-0396593**	**11307099**	**XEROX CORPORATION**
20190840US03	**United States of America**	**Granted**	**A SYSTEM AND METHOD FOR DETERMINING A TEMPERATURE DIFFERENTIAL BETWEEN PORTIONS OF AN OBJECT PRINTED BY A 3D PRINTER**	**16/903855**	**2021-0396591**	**11499873**	**XEROX CORPORATION**
20190840US04	**United States of America**	**Published**	**AN OBJECT PRINTED BY A 3D PRINTER AND A METHOD FOR DETERMINING THE TEMPERATURE OF THE OBJECT**	**17/655246**	**2022-0205845**		**XEROX CORPORATION**
20190840CN01	China	Published	SYSTEM AND METHOD FOR DETERMINING A TEMPERATURE OF AN OBJECT	202110526819 1	CN113997395 A		XEROX CORPORATION
20190840JP01	Japan	Granted	SYSTEM AND METHOD FOR DETERMINING A TEMPERATURE OF AN OBJECT	2021-092998	2021-195620	7238017	XEROX CORPORATION
20190840EP01	European Patent	Published	SYSTEM AND METHOD FOR DETERMINING A TEMPERATURE OF AN OBJECT	21177430.2	3926314		XEROX CORPORATION
20190840KR01	Korea, Republic of (KR)	Granted	SYSTEM AND METHOD FOR DETERMINING A TEMPERATURE OF AN OBJECT	10-2021-0075857	10-2021-0156224	10-2478412	XEROX CORPORATION
20200125US01	**United States of America**	**Granted**	**METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO FORM ELECTRICAL CIRCUITS ON SUBSTRATES**	**16/945509**	**2022-0032550**		**XEROX CORPORATION**
20200125CN01	China	Published	METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO FORM ELECTRICAL CIRCUITS ON SUBSTRATES	202110732156.9	CN114054779 A		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200125JP01	Japan	Published	METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO FORM ELECTRICAL CIRCUITS ON SUBSTRATES	2021-120199	2022-027546		XEROX CORPORATION
20200125EP01	European Patent	Published	METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO FORM ELECTRICAL CIRCUITS ON SUBSTRATES	21182997.3	3944912		XEROX CORPORATION
20200125KR01	Korea, Republic of (KR)	Published	METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO FORM ELECTRICAL CIRCUITS ON SUBSTRATES	10-2021-0097489	10-2022-0015955		XEROX CORPORATION
20200232US01	**United States of America**	**Allowed**	**MICRO-WELDING USING A THREE DIMENSIONAL PRINTER**	**17/060600**	**2022-0105684**		**XEROX CORPORATION**
20200232US02	**United States of America**	**Published**	**MICRO-WELDING USING A THREE DIMENSIONAL PRINTER**	**17/060825**	**2022-0105673**		**XEROX CORPORATION**
20200232US03	**United States of America**	**Granted**	**MICRO-WELDING USING A THREE DIMENSIONAL PRINTER**	**17/061213**	**2022-0105561**	**11504766**	**XEROX CORPORATION**
20200232CN01	China	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	202111073575.2	CN114273758A		XEROX CORPORATION
20200232CN02	China	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	202111078276 8	CN114273669A		XEROX CORPORATION
20200232CN03	China	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	202111129079 4	CN114273670A		XEROX CORPORATION
20200232JP01	Japan	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	2021-159865	2022-059583		XEROX CORPORATION
20200232JP02	Japan	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	2021-153707	2022-059578		XEROX CORPORATION
20200232JP03	Japan	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	2021-159903	2022-059584		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200232DE01	Germany (Federal Republic of)	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	102021124990.2	102021124990.2		XEROX CORPORATION
20200232DE02	Germany (Federal Republic of)	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	102021124991.0	102021124991.0		XEROX CORPORATION
20200232DE03	Germany (Federal Republic of)	Published	MICRO-WELDING USING A THREE DIMENSIONAL PRINTER	102021123301.1	102021123301.1		XEROX CORPORATION
20200349US01	**United States of America**	**Published**	**METHOD AND SYSTEM FOR OPERATING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER TO SHORTEN OBJECT FORMATION TIME**	**17/154063**	**2022-0226888**		**XEROX CORPORATION**
20200410US01	**United States of America**	**Granted**	**REMOVABLE INNER SHELL FOR DROSS CONTROL AND/OR REMOVAL FOR METAL PRINTER**	**17/131372**	**2022-0193780**	**11618086**	**XEROX CORPORATION**
20200410CN01	China	Published	REMOVABLE INNER SHELL FOR DROSS CONTROL AND/OR REMOVAL FOR METAL PRINTER	202111372683X	CN114653969A		XEROX CORPORATION
20200410JP01	Japan	Published	REMOVABLE INNER SHELL FOR DROSS CONTROL AND/OR REMOVAL FOR METAL PRINTER	2021-202829	2022-099280		XEROX CORPORATION
20200410DE01	Germany (Federal Republic of)	Published	REMOVABLE INNER SHELL FOR DROSS CONTROL AND/OR REMOVAL FOR METAL PRINTER	102021134162.0	102021134162.0		XEROX CORPORATION
20200410KR01	Korea, Republic of (KR)	Published	REMOVABLE INNER SHELL FOR DROSS CONTROL AND/OR REMOVAL FOR METAL PRINTER	10-2021-0166828	10-2022-0090412		XEROX CORPORATION
20200411US01	**United States of America**	**Granted**	**METHOD FOR MAGNETOHYDRODYNAMIC (MHD) PRINTHEAD/NOZZLE REUSE**	**17/131402**	**2022-0194082**	**11400714**	**XEROX CORPORATION**
20200411US02	**United States of America**	**Published**	**METHOD FOR MAGNETOHYDRODYNAMIC (MHD) PRINTHEAD/NOZZLE REUSE**	**17/850526**	**2022-0332116**		**XEROX CORPORATION**
20200411US03	**United States of America**	**Published**	**SYSTEM AND METHOD FOR MAGNETOHYDRODYNAMIC (MHD) PRINTHEAD/NOZZLE**	**17/851551**	**2022-0324031**		**XEROX CORPORATION**
20200411CN01	China	Published	METHOD FOR MAGNETOHYDRODYNAMIC (MHD) PRINTHEAD/NOZZLE REUSE	202111376203 7	CN114653964A		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200411JP01	Japan	Published	METHOD FOR MAGNETOHYDRODY NAMIC (MHD) PRINTHEAD/NOZZLE REUSE	2021-202851	2022-099281		XEROX CORPORATION
20200411DE01	Germany (Federal Republic of)	Published	METHOD FOR MAGNETOHYDRODY NAMIC (MHD) PRINTHEAD/NOZZLE REUSE	102021133945.6	102021133945.6		XEROX CORPORATION
20200411KR01	Korea, Republic of (KR)	Published	METHOD FOR MAGNETOHYDRODY NAMIC (MHD) PRINTHEAD/NOZZLE REUSE	10-2021-0166829	10-2022-0090413		XEROX CORPORATION
20200412US01	**United States of America**	**Published**	**RESISTIVE LIQUID METAL LEVEL SENSING IN A MAGNETOHYDRODY NAMIC (MHD) JETTING SYSTEM**	**17/131498**	**2022-0194088**		**XEROX CORPORATION**
20200420US01	**United States of America**	**Published**	**FABRICATION OF LATTICE STRUCTURES WITH THREE DIMENSIONAL PRINTER**	**17/143007**	**2022-0212249**		**XEROX CORPORATION**
20200420JP01	Japan	Published	FABRICATION OF LATTICE STRUCTURES WITH THREE DIMENSIONAL PRINTER	2021-206519	2022-106284		XEROX CORPORATION
20200420DE01	Germany (Federal Republic of)	Published	FABRICATION OF LATTICE STRUCTURES WITH THREE DIMENSIONAL PRINTER	102022100153.9	102022100153.9		XEROX CORPORATION
20200422US01	**United States of America**	**Published**	**BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING VIBRATIONAL ENERGY**	**17/144910**	**2022-0219381**		**XEROX CORPORATION**
20200422JP01	Japan	Published	BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING VIBRATIONAL ENERGY	2021-207640	2022-107516		XEROX CORPORATION
20200422DE01	Germany (Federal Republic of)	Published	BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING VIBRATIONAL ENERGY	102022100154.7	102022100154.7		XEROX CORPORATION
20200423US01	**United States of America**	**Published**	**BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING BURST MODE JETTING**	**17/121197**	**2022-0184708**		**XEROX CORPORATION**

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200423CN01	China	Published	BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING BURST MODE JETTING	202111446933X	CN114619046A		XEROX CORPORATION
20200423JP01	Japan	Published	BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING BURST MODE JETTING	2021-201354	2022-094339		XEROX CORPORATION
20200423DE01	Germany (Federal Republic of)	Published	BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING BURST MODE JETTING	102021129030.9	102021129030.9		XEROX CORPORATION
20200423KR01	Korea, Republic of (KR)	Published	BUILDING AN OBJECT WITH A THREE-DIMENSIONAL PRINTER USING BURST MODE JETTING	10-2021-0175691	10-2022-0085015		XEROX CORPORATION
20200427US01	**United States of America**	**Granted**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/155455**	**2022-0240387**	**11737216**	**XEROX CORPORATION**
20200430US01	**United States of America**	**Published**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER HAVING AN INCREASED MATERIAL DEPOSITION RATE**	**17/140954**	**2022-0212265**		**XEROX CORPORATION**
20200430CN01	China	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER HAVING AN INCREASED MATERIAL DEPOSITION RATE	202210001307.8	CN114713856A		XEROX CORPORATION
20200430JP01	Japan	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER HAVING AN INCREASED MATERIAL DEPOSITION RATE	2021-206176	2022-105475		XEROX CORPORATION
20200430EP01	European Patent	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER HAVING AN INCREASED MATERIAL DEPOSITION RATE	22150083.8	4023369		XEROX CORPORATION
20200430KR01	Korea, Republic of (KR)	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER HAVING AN INCREASED MATERIAL DEPOSITION RATE	10-2022-0000840	10-2022-0098695		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200438US01	**United States of America**	**Allowed**	**SYSTEM AND METHOD FOR CALIBRATING LAG TIME IN A THREE-DIMENSIONAL OBJECT PRINTER**	**17/163355**	**2022-0242048**		**XEROX CORPORATION**
20200439US01	**United States of America**	**Granted**	**SYSTEM AND METHOD FOR REDUCING DROP PLACEMENT ERRORS AT PERIMETER FEATURES ON AN OBJECT IN A THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/163363**	**2022-0241865**	**11701712**	**XEROX CORPORATION**
20200439US02	**United States of America**	**Granted**	**SYSTEM AND METHOD FOR REDUCING DROP PLACEMENT ERRORS AT PERIMETER FEATURES ON AN OBJECT IN A THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/163368**	**2022-0241866**	**11673198**	**XEROX CORPORATION**
20200450US01	**United States of America**	**Granted**	**THREE-DIMENSIONAL PRINTER WITH NITROGEN ATMOSPHERE**	**17/109800**	**2022-0168817**	**11666975**	**XEROX CORPORATION**
20200469US01	**United States of America**	**Granted**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER WITH A THERMALLY INSULATED BUILD PLATFORM TRANSLATIONAL MECHANISM**	**17/085557**	**2022-0134418**	**11684972**	**XEROX CORPORATION**
20200506US01	**United States of America**	**Allowed**	**MELTED METAL LEVEL SENSOR FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/319830**	**2022-0362858**		**XEROX CORPORATION**
20200506CN01	China	Published	MELTED METAL LEVEL SENSOR FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	202210371019 1	CN115338431 A		XEROX CORPORATION
20200506JP01	Japan	Published	MELTED METAL LEVEL SENSOR FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	2022-065121	2022-176099		XEROX CORPORATION
20200506DE01	Germany (Federal Republic of)	Published	MELTED METAL LEVEL SENSOR FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	102022111850.9	102022111850.9		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200585US01	**United States of America**	**Published**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER WITH A THERMALLY INSULATED BUILD PLATFORM TRANSLATIONAL MECHANISM**	**17/143378**	**2022-0212257**		**XEROX CORPORATION**
20200601US01	**United States of America**	**Published**	**CLAMPING MECHANISM FOR 3D PRINTING BUILD PLATE**	**17/400916**	**2023-0049328**		**XEROX CORPORATION**
20200640US01	**United States of America**	**Allowed**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD FOR PREPARING THE METAL DROP EJECTING 3D OBJECT PRINTER FOR PRINTING**	**17/147773**	**2022-0219238**		**XEROX CORPORATION**
20200640US02	**United States of America**	**Published**	**A REMOVABLE VESSEL AND METAL INSERT FOR PREPARING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER FOR PRINTING**	**17/147810**	**2022-0219240**		**XEROX CORPORATION**
20200640CN01	China	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD FOR PREPARING THE METAL DROP EJECTING 3D OBJECT PRINTER FOR PRINTING	202210014413.X	CN114309663A		XEROX CORPORATION
20200640CN02	China	Published	A REMOVABLE VESSEL AND METAL INSERT FOR PREPARING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER FOR PRINTING	202210034041.7	CN114762899A		XEROX CORPORATION
20200640JP01	Japan	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD FOR PREPARING THE METAL DROP EJECTING 3D OBJECT PRINTER FOR PRINTING	2021-214100	2022-108720		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200640JP02	Japan	Published	A REMOVABLE VESSEL AND METAL INSERT FOR PREPARING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER FOR PRINTING	2021-214153	2022-108721		XEROX CORPORATION
20200640EP01	European Patent	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD FOR PREPARING THE METAL DROP EJECTING 3D OBJECT PRINTER FOR PRINTING	22150215.6	4029631		XEROX CORPORATION
20200640EP02	European Patent	Published	A REMOVABLE VESSEL AND METAL INSERT FOR PREPARING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER FOR PRINTING	22150218.0	4029632		XEROX CORPORATION
20200640KR01	Korea, Republic of (KR)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD FOR PREPARING THE METAL DROP EJECTING 3D OBJECT PRINTER FOR PRINTING	10-2022-0001952	10-2022-0102571		XEROX CORPORATION
20200640KR02	Korea, Republic of (KR)	Published	A REMOVABLE VESSEL AND METAL INSERT FOR PREPARING A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER FOR PRINTING	10-2022-0001953	10-2022-0102572		XEROX CORPORATION
20200663US02	**United States of America**	**Published**	**METHOD FOR HIGH TEMPERATURE HEAT TREATING OF METAL OBJECTS FORMED IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/451501**	**2022-0126371**		**XEROX CORPORATION**
20200693US01	**United States of America**	**Published**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES**	**17/457966**	**2023-0173585**		**XEROX CORPORATION**

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200693CN01	China	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	202211372601 6			XEROX CORPORATION
20200693JP01	Japan	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	2022-176834			XEROX CORPORATION
20200693EP01	European Patent	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	22208366.9			XEROX CORPORATION
20200693KR01	Korea, Republic of (KR)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	10-2022-0165588			XEROX CORPORATION
20200720US01	**United States of America**	**Allowed**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES**	**17/393115**	**2023-0037539**		**XEROX CORPORATION**
20200720CN01	China	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	202210849860.7	CN115703154A		XEROX CORPORATION
20200720JP01	Japan	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	2022-112509	2023-022818		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200720DE01	Germany (Federal Republic of)	Published	METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	102022118748.9			XEROX CORPORATION
20200723US01	**United States of America**	**Published**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES**	**17/353555**	**2022-0402060**		**XEROX CORPORATION**
20200723CN01	China	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	202210561325.1	CN115570152A		XEROX CORPORATION
20200723JP01	Japan	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	2022-083261	2023-001876		XEROX CORPORATION
20200723DE01	Germany (Federal Republic of)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	102022114596.4	102022114596.4		XEROX CORPORATION
20200723KR01	Korea, Republic of (KR)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	10-2022-0073300	10-2022-0169910		XEROX CORPORATION
20200731US01	**United States of America**	**Published**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM**	**17/360515**	**2022-0410302**		**XEROX CORPORATION**

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200731CN01	China	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	2022105982947	CN115592138A		XEROX CORPORATION
20200731JP01	Japan	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	2022-085029	2023-007414		XEROX CORPORATION
20200731DE01	Germany (Federal Republic of)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	102022114871.8	102022114871.8		XEROX CORPORATION
20200731KR01	Korea, Republic of (KR)	Application	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	10-2022-0076025			XEROX CORPORATION
20200733US01	**United States of America**	**Published**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES**	**17/412399**	**2023-0063103**		**XEROX CORPORATION**
20200733CN01	China	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	202210884730.7	CN115722686A		XEROX CORPORATION
20200733JP01	Japan	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	2022-118699	2023-033137		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20200733DE01	Germany (Federal Republic of)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FORMING METAL SUPPORT STRUCTURES	102022119270.9			XEROX CORPORATION
20210001US01	**United States of America**	**Granted**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER WITH DOUBLE THERMAL LAYER INSULATION FOR THE BUILD PLATFORM TRANSLATIONAL MECHANISM**	**17/339969**	**2022-0388063**	**11731199**	**XEROX CORPORATION**
20210036US01	**United States of America**	**Granted**	**LIQUID METAL EJECTOR LEVEL SENSING SYSTEM AND METHODS THEREOF**	**17/367991**	**2023-0008592**	**11654482**	**XEROX CORPORATION**
20210036US02	**United States of America**	**Published**	**LIQUID METAL EJECTOR LEVEL SENSING SYSTEM AND METHODS THEREOF**		**2023-0241670**		**XEROX CORPORATION**
20210125US01	**United States of America**	**Published**	**VESSEL FOR MELTING METAL IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/391265**	**2023-0034213**		**XEROX CORPORATION**
20210125CN01	China	Published	VESSEL FOR MELTING METAL IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	202210849859.4	CN115701367A		XEROX CORPORATION
20210125JP01	Japan	Published	VESSEL FOR MELTING METAL IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	2022-112445	2023-021931		XEROX CORPORATION
20210125DE01	Germany (Federal Republic of)	Published	VESSEL FOR MELTING METAL IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	102022117691.6			XEROX CORPORATION
20210125KR01	Korea, Republic of (KR)	Application	VESSEL FOR MELTING METAL IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER	10-2022-0093679			XEROX CORPORATION
20210127US01	**United States of America**	**Published**	**DROSS ABATEMENT SYSTEM AND METHODS THEREOF**	**17/348908**	**2022-0402023**		**XEROX CORPORATION**
20210127CN01	China	Published	DROSS ABATEMENT SYSTEM AND METHODS THEREOF	202210522328.4	CN115475966A		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20210127JP01	Japan	Published	DROSS ABATEMENT SYSTEM AND METHODS THEREOF	2022-083230	2022-192013		XEROX CORPORATION
20210127DE01	Germany (Federal Republic of)	Published	DROSS ABATEMENT SYSTEM AND METHODS THEREOF	102022114315.5	102022114315.5		XEROX CORPORATION
20210137US01	**United States of America**	**Published**	**SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER**	**17/371391**	**2023-0012088**		**XEROX CORPORATION**
20210137US02	**United States of America**	**Published**	**SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER**	**17/371470**	**2023-0011639**		**XEROX CORPORATION**
20210137CN01	China	Published	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	202210676197.5	CN115647384A		XEROX CORPORATION
20210137CN02	China	Published	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	202210660593.9	CN115592134A		XEROX CORPORATION
20210137JP01	Japan	Published	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	2022-097900	2023-010605		XEROX CORPORATION
20210137JP02	Japan	Published	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	2022-097917	2023-010606		XEROX CORPORATION
20210137DE01	Germany (Federal Republic of)	Published	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	102022115146.8			XEROX CORPORATION
20210137DE02	Germany (Federal Republic of)	Published	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	102022115473.4			XEROX CORPORATION
20210137KR01	Korea, Republic of (KR)	Application	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	10-2022-0081307			XEROX CORPORATION
20210137KR02	Korea, Republic of (KR)	Application	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	10-2022-0081281			XEROX CORPORATION

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20210168US01	**United States of America**	**Published**	**MODIFICATION OF THE METAL JETTING COMPOSITIONS AND METHODS THEREOF**	**17/462804**	**2023-0066534**		**XEROX CORPORATION**
20210168US02	**United States of America**	**Published**	**EJECTOR FOR MODIFICATION OF METAL JETTING COMPOSITIONS AND METHODS THEREOF**	**17/462713**	**2023-0063825**		**XEROX CORPORATION**
20210168CN01	China	Published	MODIFICATION OF THE METAL JETTING COMPOSITIONS AND METHODS THEREOF	202210919622.9	CN115722679A		XEROX CORPORATION
20210168CN02	China	Published	EJECTOR FOR MODIFICATION OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	202210889996.0	CN115722646A		XEROX CORPORATION
20210168JP01	Japan	Published	MODIFICATION OF THE METAL JETTING COMPOSITIONS AND METHODS THEREOF	2022-124730	2023-035880		XEROX CORPORATION
20210168JP02	Japan	Published	EJECTOR FOR MODIFICATION OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	2022-126107	2023-035885		XEROX CORPORATION
20210168DE01	Germany (Federal Republic of)	Published	MODIFICATION OF THE METAL JETTING COMPOSITIONS AND METHODS THEREOF	102022120224.0			XEROX CORPORATION
20210168DE02	Germany (Federal Republic of)	Published	EJECTOR FOR MODIFICATION OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	102022120223.2			XEROX CORPORATION
20210168KR01	Korea, Republic of (KR)	Application	MODIFICATION OF THE METAL JETTING COMPOSITIONS AND METHODS THEREOF	10-2022-0106921			XEROX CORPORATION
20210168KR02	Korea, Republic of (KR)	Application	EJECTOR FOR MODIFICATION OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	10-2022-0106922			XEROX CORPORATION
20210193US01	**United States of America**	**Published**	**DROSS EXTRACTION SYSTEM AND METHODS THEREOF**	**17/374762**	**2023-0015142**		**XEROX CORPORATION**
20210382US01	**United States of America**	**Published**	**ALLOYING OF METAL JETTING COMPOSITIONS AND METHODS THEREOF**	**17/448940**	**2023-0097037**		**XEROX CORPORATION**
20210382CN01	China	Published	ALLOYING OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	202211071987.7			XEROX CORPORATION
20210382JP01	Japan	Published	ALLOYING OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	2022-145568			XEROX CORPORATION
20210382EP01	European Patent	Published	ALLOYING OF METAL JETTING COMPOSITIONS AND METHODS THEREOF	22194327.7	4155010		XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20210390US01	**United States of America**	**Published**	**LIQUID METAL DROP MASS MEASUREMENTS AND METHODS THEREOF**	**17/447174**	**2023-0076563**		**XEROX CORPORATION**
20210390JP01	Japan	Published	LIQUID METAL DROP MASS MEASUREMENTS AND METHODS THEREOF	2022-135464	2023-039415		XEROX CORPORATION
20210390DE01	Germany (Federal Republic of)	Published	LIQUID METAL DROP MASS MEASUREMENTS AND METHODS THEREOF	102022120225.9			XEROX CORPORATION
20210391US01	**United States of America**	**Allowed**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING BUILD AND RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM**	**17/457346**	**2023-0076563**		**XEROX CORPORATION**
20210391CN01	China	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING BUILD AND RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	202211359247			XEROX CORPORATION
20210391JP01	Japan	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING BUILD AND RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	2022-176832			XEROX CORPORATION
20210391DE01	Germany (Federal Republic of)	Published	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING BUILD AND RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM	102022131639.4			XEROX CORPORATION
20210411US01	**United States of America**	**Published**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER HAVING AN IMPROVED HEATED BUILD PLATFORM**	**17/455785**	**2023-0158573**		**XEROX CORPORATION**

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20210421US01	**United States of America**	**Published**	**DEVICE AND METHOD OF OPERATION FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER THAT FACILITATES REMOVAL OF SUPPORT STRUCTURES FROM A METAL OBJECT**	**17/649393**	**2023-0241680**		**XEROX CORPORATION**
20210421CN01	China	Application	DEVICE AND METHOD OF OPERATION FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER THAT FACILITATES REMOVAL OF SUPPORT STRUCTURES FROM A METAL OBJECT	202310030745			XEROX CORPORATION
20210421JP01	Japan	Application	DEVICE AND METHOD OF OPERATION FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER THAT FACILITATES REMOVAL OF SUPPORT STRUCTURES FROM A METAL OBJECT	2023-000506			XEROX CORPORATION
20210421DE01	Germany (Federal Republic of)	Application	DEVICE AND METHOD OF OPERATION FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER THAT FACILITATES REMOVAL OF SUPPORT STRUCTURES FROM A METAL OBJECT	102023100195.7			XEROX CORPORATION
20210421KR01	Korea, Republic of (KR)	Application	DEVICE AND METHOD OF OPERATION FOR A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER THAT FACILITATES REMOVAL OF SUPPORT STRUCTURES FROM A METAL OBJECT	10-2023-0009930			XEROX CORPORATION

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20210430US01	**United States of America**	**Published**	**DEVICE AND METHOD FOR CLEANING AN ORIFICE IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) METAL OBJECT PRINTER**	**17/648490**	**2023-0226614**		**XEROX CORPORATION**
20210458US01	**United States of America**	**Published**	**EJECTOR FOR METAL JETTING BULK METALLIC GLASS COMPOSITIONS AND METHODS THEREOF**	**17/554089**	**2023-0191487**		**XEROX CORPORATION**
20210502US01	**United States of America**	**Published**	**METAL DROP EJECTING THREE-DIMENSIONAL(3D) OBJECT PRINTER AND IMPROVED METHOD FOR OPERATING THE PRINTER**	**17/455590**	**2023-0150026**		**XEROX CORPORATION**
20210502CN01	China	Published	METAL DROP EJECTING THREE-DIMENSIONAL(3D) OBJECT PRINTER AND IMPROVED METHOD FOR OPERATING THE PRINTER	202211423932 8			XEROX CORPORATION
20210502JP01	Japan	Published	METAL DROP EJECTING THREE-DIMENSIONAL(3D) OBJECT PRINTER AND IMPROVED METHOD FOR OPERATING THE PRINTER	2022-175525			XEROX CORPORATION
20210502DE01	Germany (Federal Republic of)	Published	METAL DROP EJECTING THREE-DIMENSIONAL(3D) OBJECT PRINTER AND IMPROVED METHOD FOR OPERATING THE PRINTER	102022130624.0			XEROX CORPORATION
20210502KR01	Korea, Republic of (KR)	Application	METAL DROP EJECTING THREE-DIMENSIONAL(3D) OBJECT PRINTER AND IMPROVED METHOD FOR OPERATING THE PRINTER	10-2022-0151617			XEROX CORPORATION
20210512US01	**United States of America**	**Published**	**LIQUID METAL EJECTOR DUAL SENSOR SYSTEM AND METHODS THEREOF**	**17/454926**	**2023-0150033**		**XEROX CORPORATION**
20210512CN01	China	Published	LIQUID METAL EJECTOR DUAL SENSOR SYSTEM AND METHODS THEREOF	202211437465.4			XEROX CORPORATION
20210512JP01	Japan	Published	LIQUID METAL EJECTOR DUAL SENSOR SYSTEM AND METHODS THEREOF	2022-179183			XEROX CORPORATION
20210512EP01	European Patent	Published	LIQUID METAL EJECTOR DUAL SENSOR SYSTEM AND METHODS THEREOF	22203929.9			XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20210512KR01	Korea, Republic of (KR)	Application	LIQUID METAL EJECTOR DUAL SENSOR SYSTEM AND METHODS THEREOF	10-2022-0149380			XEROX CORPORATION
20210514US01	**United States of America**	**Application**	**LIQUID METAL EJECTOR LEVEL SENSE SYSTEM AND METHODS THEREOF**	**17/853676**			**XEROX CORPORATION**
20210514CN01	China	Application	LIQUID METAL EJECTOR LEVEL SENSE SYSTEM AND METHODS THEREOF	202310627607.1			XEROX CORPORATION
20210514JP01	Japan	Application	LIQUID METAL EJECTOR LEVEL SENSE SYSTEM AND METHODS THEREOF	102023115041.3			XEROX CORPORATION
20210514DE01	Germany (Federal Republic of)	Application	LIQUID METAL EJECTOR LEVEL SENSE SYSTEM AND METHODS THEREOF	2023-090719			XEROX CORPORATION
20210514KR01	Korea, Republic of (KR)	Application	LIQUID METAL EJECTOR LEVEL SENSE SYSTEM AND METHODS THEREOF	10-2023-0080174			XEROX CORPORATION
20210517US01	**United States of America**	**Published**	**LIQUID METAL EJECTOR BUOYANT SENSING SYSTEM AND METHODS THEREOF**	**17/534040**	**2023-0158575**		**XEROX CORPORATION**
20210540US01	**United States of America**	**Application**	**METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR BUILDING SUPPORT STRUCTURES**	**17/652911**			**XEROX CORPORATION**
20210540CN01	China	Application	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR BUILDING SUPPORT STRUCTURES	202310159135			XEROX CORPORATION
20210540JP01	Japan	Application	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR BUILDING SUPPORT STRUCTURES	2023-023408			XEROX CORPORATION
20210540DE01	Germany (Federal Republic of)	Application	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR BUILDING SUPPORT STRUCTURES	102023101732.2			XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20210540KR01	Korea, Republic of (KR)	Application	A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR BUILDING SUPPORT STRUCTURES	10-2023-0023504			XEROX CORPORATION
20210571US01	**United States of America**	**Application**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR BUILDING SUPPORT STRUCTURES**	**17/652914**			**XEROX CORPORATION**
20210588US01	**United States of America**	**Application**	**A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER AND METHOD OF OPERATION FOR FACILITATING BUILD AND RELEASE OF A METAL OBJECT FROM A BUILD PLATFORM**	**17/652919**			**XEROX CORPORATION**
20210591US01	**United States of America**	**Application**	**SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER**	**17/653138**			**XEROX CORPORATION**
20210591JP01	Japan	Application	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	2023-024915			XEROX CORPORATION
20210591DE01	Germany (Federal Republic of)	Application	SYSTEM AND METHOD FOR CONTROLLING TEMPERATURE IN A THREE-DIMENSIONAL (3D) PRINTER	102023103910.5			XEROX CORPORATION
20210604US01	**United States of America**	**Application**	**DROSS EXTRACTION SYSTEM FOR AN MHD PRINTER AND METHODS THEREOF**	**17/651248**			**XEROX CORPORATION**
20210604JP01	Japan	Application	DROSS EXTRACTION SYSTEM FOR AN MHD PRINTER AND METHODS THEREOF	2023-016670			XEROX CORPORATION
20210604DE01	Germany (Federal Republic of)	Application	DROSS EXTRACTION SYSTEM FOR AN MHD PRINTER AND METHODS THEREOF	102023101731.4			XEROX CORPORATION
20210654US01	**United States of America**	**Application**	**DROSS EXTRACTION IMPLEMENT FOR AN MHD PRINTER AND METHODS THEREOF**	**17/652532**			**XEROX CORPORATION**
20210654JP01	Japan	Application	DROSS EXTRACTION IMPLEMENT FOR AN MHD PRINTER AND METHODS THEREOF	2023-023202			XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20210654DE01	Germany (Federal Republic of)	Application	DROSS EXTRACTION IMPLEMENT FOR AN MHD PRINTER AND METHODS THEREOF	102023103914.8			XEROX CORPORATION
20210679US01	**United States of America**	**Application**	**THREE-DIMENSIONAL UNSUPPORTED STRUCTURAL FEATURES AND SYSTEM AND METHODS THEREOF**	**17/843098**			**XEROX CORPORATION**
20210679CN01	China	Application	THREE-DIMENSIONAL UNSUPPORTED STRUCTURAL FEATURES AND SYSTEM AND METHODS THEREOF	202310630047.5			XEROX CORPORATION
20210679JP01	Japan	Application	THREE-DIMENSIONAL UNSUPPORTED STRUCTURAL FEATURES AND SYSTEM AND METHODS THEREOF	23176187.5			XEROX CORPORATION
20210679EP01	European Patent	Application	THREE-DIMENSIONAL UNSUPPORTED STRUCTURAL FEATURES AND SYSTEM AND METHODS THEREOF	2023-085820			XEROX CORPORATION
20210679KR01	Korea, Republic of (KR)	Application	THREE-DIMENSIONAL UNSUPPORTED STRUCTURAL FEATURES AND SYSTEM AND METHODS THEREOF	10-2023-0074664			XEROX CORPORATION
20220022US01	**United States of America**	**Application**	**METHOD AND APPARATUS FOR FORMING OVERHANGING STRUCTURES IN ADDITIVE MANUFACTURED PARTS THAT HAVE AN IMPROVED SURFACE ROUGHNESS**	**17/664470**			**XEROX CORPORATION**
20220022CN01	China	Application	METHOD AND APPARATUS FOR FORMING OVERHANGING STRUCTURES IN ADDITIVE MANUFACTURED PARTS THAT HAVE AN IMPROVED SURFACE ROUGHNESS	202310513707.1			XEROX CORPORATION
20220022JP01	Japan	Application	METHOD AND APPARATUS FOR FORMING OVERHANGING STRUCTURES IN ADDITIVE MANUFACTURED PARTS THAT HAVE AN IMPROVED SURFACE ROUGHNESS	23171449.4			XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20220022EP01	European Patent	Application	METHOD AND APPARATUS FOR FORMING OVERHANGING STRUCTURES IN ADDITIVE MANUFACTURED PARTS THAT HAVE AN IMPROVED SURFACE ROUGHNESS	2023-077801			XEROX CORPORATION
20220022KR01	Korea, Republic of (KR)	Application	METHOD AND APPARATUS FOR FORMING OVERHANGING STRUCTURES IN ADDITIVE MANUFACTURED PARTS THAT HAVE AN IMPROVED SURFACE ROUGHNESS	10-2023-0060889			XEROX CORPORATION
20220047US01	**United States of America**	**Application**	**DYNAMIC IN-FLIGHT CHARACTERIZATION OF BUILD MATERIAL IN A 3D PRINTER AND SYSTEM AND METHODS THEREOF**	**18/059638**			**XEROX CORPORATION**
20220053US01	**United States of America**	**Application**	**PRINTING A THREE-DIMENSIONAL PART WITH ENHANCED DROP PLACEMENT AND SYSTEM AND METHODS THEREOF**	**18/047359**			**XEROX CORPORATION**
20220053CN01	China	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART WITH ENHANCED DROP PLACEMENT AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220053JP01	Japan	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART WITH ENHANCED DROP PLACEMENT AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220053EP01	European Patent	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART WITH ENHANCED DROP PLACEMENT AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220053KR01	Korea, Republic of (KR)	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART WITH ENHANCED DROP PLACEMENT AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220054US01	**United States of America**	**Application**	**PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF**	**18/047365**			**XEROX CORPORATION**

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20220054JP01	Japan	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220054EP01	European Patent	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220054KR01	Korea, Republic of (KR)	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220058US01	**United States of America**	**Application**	**PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF**	**18/047371**			**XEROX CORPORATION**
20220058JP01	Japan	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220058EP01	European Patent	Currently Designated To Be Filed	PRINTING A THREE-DIMENSIONAL PART TO ENHANCE SEPARATION AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220063US01	**United States of America**	**Application**	**HIGH-THROUGHPUT LIQUID METAL INKJET NOZZLE WITH POROUS LAYER FOR MENISCUS DAMPING**	**17/820468**			**XEROX CORPORATION**
20220063US02	**United States of America**	**Application**	**HIGH-THROUGHPUT LIQUID METAL INKJET NOZZLE WITH POROUS LAYER FOR MENISCUS DAMPING**	**17/820481**			**XEROX CORPORATION**
20220063CN01	China	Application	HIGH-THROUGHPUT LIQUID METAL INKJET NOZZLE WITH POROUS LAYER FOR MENISCUS DAMPING	202310916776.7			XEROX CORPORATION
20220063JP01	Japan	Currently Designated To Be Filed	HIGH-THROUGHPUT LIQUID METAL INKJET NOZZLE WITH POROUS LAYER FOR MENISCUS DAMPING				XEROX CORPORATION
20220063EP01	European Patent	Application	HIGH-THROUGHPUT LIQUID METAL INKJET NOZZLE WITH POROUS LAYER FOR MENISCUS DAMPING	23188900.7			XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20220063KR01	Korea, Republic of (KR)	Currently Designated To Be Filed	HIGH-THROUGHPUT LIQUID METAL INKJET NOZZLE WITH POROUS LAYER FOR MENISCUS DAMPING				XEROX CORPORATION
20220070US01	**United States of America**	**Application**	**LEVERAGING PRINTING STANDOFF DISTANCE IN THREE-DIMENSIONAL PRINTING TO ENHANCE PART SEPARATION AND SYSTEM AND METHODS THEREOF**	**17/883088**			**XEROX CORPORATION**
20220070JP01	Japan	Currently Designated To Be Filed	LEVERAGING PRINTING STANDOFF DISTANCE IN THREE-DIMENSIONAL PRINTING TO ENHANCE PART SEPARATION AND SYSTEM AND METHODS THEREOF				XEROX CORPORATION
20220103US01	**United States of America**	**Application**	**SYSTEM AND METHOD FOR CONTROLLING FLOW THROUGH A 3D PRINTER**	**17/930226**			**XEROX CORPORATION**
20220103US02	**United States of America**	**Application**	**SYSTEM AND METHOD FOR CONTROLLING FLOW THROUGH A 3D PRINTER**	**17/930233**			**XEROX CORPORATION**
20220103CN01	China	Currently Designated To Be Filed	SYSTEM AND METHOD FOR CONTROLLING FLOW THROUGH A 3D PRINTER				XEROX CORPORATION
20220103JP01	Japan	Currently Designated To Be Filed	SYSTEM AND METHOD FOR CONTROLLING FLOW THROUGH A 3D PRINTER				XEROX CORPORATION
20220103EP01	European Patent	Currently Designated To Be Filed	SYSTEM AND METHOD FOR CONTROLLING FLOW THROUGH A 3D PRINTER				XEROX CORPORATION
20220103KR01	Korea, Republic of (KR)	Currently Designated To Be Filed	SYSTEM AND METHOD FOR CONTROLLING FLOW THROUGH A 3D PRINTER				XEROX CORPORATION
20220107US01	**United States of America**	**Application**	**INSPECTION SYSTEM FOR THREE-DIMENSIONAL PRINTER AND METHODS THEREOF**	**18/059643**			**XEROX CORPORATION**
20220107CN01	China	Currently Designated To Be Filed	INSPECTION SYSTEM FOR THREE-DIMENSIONAL PRINTER AND METHODS THEREOF				XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20220107JP01	Japan	Currently Designated To Be Filed	INSPECTION SYSTEM FOR THREE-DIMENSIONAL PRINTER AND METHODS THEREOF				XEROX CORPORATION
20220107EP01	European Patent	Currently Designated To Be Filed	INSPECTION SYSTEM FOR THREE-DIMENSIONAL PRINTER AND METHODS THEREOF				XEROX CORPORATION
20220107KR01	Korea, Republic of (KR)	Currently Designated To Be Filed	INSPECTION SYSTEM FOR THREE-DIMENSIONAL PRINTER AND METHODS THEREOF				XEROX CORPORATION
20220111US01	**United States of America**	**Application**	**IMPROVED VESSEL FOR ATTENUATING DROSS IN MELTED METAL IN A METAL DROP EJECTING THREE-DIMENSIONAL (3D) OBJECT PRINTER**	**17/935691**			**XEROX CORPORATION**
20220182US01	**United States of America**	**Application**	**METHOD OF CREATING BIMETALLIC PARTS USING LIQUID METAL ADDITIVE MANUFACTURING.**	**18/213577**			**XEROX CORPORATION**
20220184US01	**United States of America**	**Application**	**LINE SPACING MODIFICATION TO PRINT UNSUPPORTED STEP OUT IN 3D METAL OBJECTS**	**18/338998**			**XEROX CORPORATION**
20220192US01	**United States of America**	**Application**	**A NON-CONTACT METHOD FOR CLEARING OCCLUSION FROM A METAL JETTING PRINTHEAD NOZZLE**	**18/307352**			**XEROX CORPORATION**
20220192US02	**United States of America**	**Currently Designated To Be Filed**	**A NON-CONTACT METHOD FOR CLEARING OCCLUSION FROM A METAL JETTING PRINTHEAD NOZZLE**				**XEROX CORPORATION**
20220195US01	**United States of America**	**Currently Designated To Be Filed**	**BRIDGING INTERNAL CHANNELS BEYOND 1.75MM IN 3D METAL OBJECTS**				**XEROX CORPORATION**
20220385US01	**United States of America**	**Currently Designated To Be Filed**	**OPTIMIZED MAGNETOHYDRODYNAMICS PUMP WITH FLOW CONSTRICTION**				**XEROX CORPORATION**
20220401US01	**United States of America**	**Currently Designated To Be Filed**	**ENHANCING WETTING IN A 3D MHD METAL PRINTHEAD USING A SECONDARY METAL SUPPLY**				**XEROX CORPORATION**
20220409US01	**United States of America**	**Currently Designated To Be Filed**	**ALLOY HARDENING OPTIMIZATION FOR PARTS 3D-PRINTED VIA LIQUID METAL JETTING**				**XEROX CORPORATION**

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20220410US01	United States of America	Application	PERIMETER AND INFILL OPTIMIZATIONS FOR LIQUID METAL JETTING 3D PRINTING	18/329259			XEROX CORPORATION
20220412US01	United States of America	Currently Designated To Be Filed	A WAY TO INCREASE PART HEIGHT PRINTING CAPABILITY FOR LIQUID METAL 3D PRINTER USING A DYNAMIC THERMAL ENCLOSURE WITH A ONE AXES HYBRID SHIELD SYSTEM				XEROX CORPORATION
20220431US01	United States of America	Currently Designated To Be Filed	WATER SOLUBLE BORON OXIDE SUPPORT MATERIAL FOR 3D PRINTED ALUMINUM				XEROX CORPORATION
20220461US01	United States of America	Currently Designated To Be Filed	AUTOMATED DROP COALESCENCE MEASUREMENT AND MONITORING FOR 3D METAL JET PRINTERS				XEROX CORPORATION
20220505US01	United States of America	Application	SPARSE FILL IN 3D METAL OBJECTS	18/358369			XEROX CORPORATION
20220524US01	United States of America	Currently Designated To Be Filed	IN SITU DROP MASS ESTIMATION AND PART QUALITY MONITORING FOR 3D METAL JET PRINTERS				XEROX CORPORATION
20220525US01	United States of America	Currently Designated To Be Filed	SCANNING OPTICAL SYSTEM FOR LASER ILLUMINATION AND PYROMETER TEMPERATURE SENSING				PALO ALTO RESEARCH CENTER INCORPORATED XEROX CORPORATION
20220531US01	United States of America	Currently Designated To Be Filed	SURFACE HEIGHT MEASUREMENTS/IMAGING WITH SCANNING PATH FOLLOWING THE 3D PRINTING TOOLPATH				PALO ALTO RESEARCH CENTER INCORPORATED XEROX CORPORATION
20220532US01	United States of America	Currently Designated To Be Filed	TEMPERATURE MEASUREMENT & CONTROL FOR LIQUID METAL JETTING 3D PRINTING				PALO ALTO RESEARCH CENTER INCORPORATED XEROX CORPORATION
20220545US01	United States of America	Currently Designated To Be Filed	IN SITU DROP PLACEMENT MONITORING FOR 3D METAL JET PRINTERS				XEROX CORPORATION

Patent Reference	Country	Status	Title	Application Number	Publication Number	Patent No.	Original Owner
20230001US01	United States of America	Currently Designated To Be Filed	METHOD OF SEMI-PASSIVE COOLING PNEUMATIC CYLINDERS FOR VERY HIGH TEMPERATURE USAGE IN METAL ADDITIVE PRINTING 3D				XEROX CORPORATION
20230084US01	United States of America	Currently Designated To Be Filed	STRAIGHT SKELETON ARCHITECTURE-BASED TOOLPATH DEVELOPMENT FOR 3D LIQUID METAL PRINTER				XEROX CORPORATION

Transferred Design Patents

Invention Reference	Patent Reference	Country	Status	Patent Application Title	Application Number	Publication Number	Patent No.
20190681	**20190681US01**	**United States of America**	**Granted**	**3D PRINTER**	**29/713686**		**D921718**
20190681	20190681KR01	Korea, Republic of (KR)	Granted	ALLOY	30-2020-0019876		30-1134267
20190681	20190681JP01	Japan	Granted	ALLOY	2020-009624	2020-009624	1680603
20190681	20190681EM01	European Union	Granted	3D PRINTER	007954805-0001		007954805-0001
20190681	20190681CN01	China	Granted	ALLOY	202030223542.1		ZL202030223542.1
20190681	20190681GB01	United Kingdom	Granted	3D PRINTER	90079548050001		90079548050001
20210598	**20210598US01**	**United States of America**	**Application**	**DISPLAY SCREEN WITH ICON**	**29/820443**		
20210598	20210598CN01	China	Application	ELEM X NAMEPLATE PRODUCT IDENTITY - BLACK	202230381951.3		
20210598	20210598JP01	Japan	Granted	ELEM X NAMEPLATE PRODUCT IDENTITY - BLACK	2022-013393		1732573
20210598	20210598EM01	European Union	Granted	ELEM X NAMEPLATE PRODUCT IDENTITY - BLACK	9068208-0001		9068208-0001
20210598	**20210598US02**	**United States of America**	**Application**	**RAISED LABEL WITH SURFACE ORNAMENTATION**	**29/825001**		
20210598	20210598GB01	United Kingdom	Granted	ICONS FOR DISPLAY SCREENS	6215380		6215380
20210598	20210598EM02	European Union	Granted	RAISED LABEL WITH SURFACE ORNAMENTATION	9068216-0001		9068216-0001
20210598	20210598GB02	United Kingdom	Granted	RAISED LABEL WITH SURFACE ORNAMENTATION	6215381		6215381
20210598	20210598CN02	China	Application	RAISED LABEL WITH SURFACE ORNAMENTATION	202230381956.6		