
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**SCHEDULE 13D
(Rule 13d-102)**

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT
TO RULE 13d-2(a)
(Amendment No.)***

**Advanced Emissions Solutions, Inc.
(Name of Issuer)**

**Common stock, par value \$0.001 per share
(Title of Class of Securities)**

**00770C101
(CUSIP Number)**

**Richard Campbell-Breeden
Arq Limited
30A Brook Street
London W1K 5DJ
United Kingdom
+44-7824-443808**

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

**February 13, 2023
(Date of Event Which Requires Filing of this Statement)**

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act.

1.	Name of Reporting Persons ARQ LIMITED		
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3.	SEC Use Only		
4.	Source of Funds (See Instructions) WC		
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="checkbox"/>		
6.	Citizenship or Place of Organization Jersey		
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 3,814,864 shares of Common Stock	
	8.	Shared Voting Power 0	
	9.	Sole Dispositive Power 3,814,864 shares of Common Stock	
	10.	Shared Dispositive Power	
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,814,864 shares of Common Stock		
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>		
13.	Percent of Class Represented by Amount in Row 11 14.22% ⁽¹⁾		
14.	Type of Reporting Person (See Instructions) CO		

(1) Based upon 26,824,773 shares of the Issuer's Common Stock outstanding as of February 2, 2023

Item 1. Security and Issuer

This statement on Schedule 13D (this “**Statement**”) is filed with respect to the common stock, par value \$0.001 per share (“**Common Stock**”), of Advanced Emissions Solutions, Inc., a Delaware corporation (the “**Issuer**”). The address of the principal executive offices of the Issuer is 051 E. Maplewood Avenue, Suite 210 Greenwood Village, Colorado. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable.

Item 2. Identity and Background

(a, b, c, f) This Statement is being filed by Arq Limited, a company incorporated under the laws of Jersey (“**Arq**” or the “**Reporting Entity**”).

Arq is an environmental technology company founded in 2015 that has developed a process for producing specialty carbon products from coal mining waste.

The business address for the Reporting Entity is:

Arq Limited
30A Brook Street
London W1K 5DJ
United Kingdom

The executive Officers and Directors of Arq have resigned their respective positions in all of the direct and indirect subsidiaries of Arq upon the consummation of the Purchase Agreement (as defined below) with the Issuer. The Issuer purchased from Arq all of the issued and outstanding equity interests of each of the subsidiaries of Arq and assumed all contracts and contractual liabilities of Arq. Arq has no controlling shareholder otherwise.

Positions at Arq:

Name	Position	Citizenship	Principal Occupation
Richard Campbell-Breeden	Director	UK	Investor, Advisor
Julian Alexander McIntyre	Director	UK	Entrepreneur, Investor
Joseph William Valis	Director	USA	Investor, Advisor
Rufus William West	Director	USA	
Jeremy Matthew Blank	Director	USA	Fund Manager
Steven Jacobs	Director	USA	
Simcha Mordechai Mann	Director	Canada	

(d) Criminal Proceedings: During the previous five (5) years, neither the Reporting Entity, nor, to the knowledge of the Reporting Entity, any director, executive officer or controlling person of the Reporting Entity, has been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) Civil Proceedings: During the previous five (5) years, neither the Reporting Entity, nor, to the knowledge of the Reporting Entity, any director, executive officer or controlling person of the Reporting Entity, has been party to a civil proceeding of a judicial or administrative body of competent jurisdiction such that, as a result of such proceeding, the Reporting Entity or any such individual was or is subject to a judgment, decree or final order enjoining future violations, of, or prohibiting or mandating activity subject to, federal or state securities laws or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration

On February 1, 2023, the Reporting Entity and the Issuer entered into a Securities Purchase Agreement (the “**Purchase Agreement**”), pursuant to which the Issuer acquired all of the direct and indirect equity interests of Arq’s subsidiaries in exchange for consideration consisting of (i) 3,814,864 shares of common stock and (ii) 5,294,462 shares of Series A Convertible Preferred Stock par value \$0.001 per share, of ADES (the “**Series A Preferred Stock**”).

Each share of Series A Preferred Stock will be automatically converted into a share of Common Stock upon approval by the holders of the percentage of Common Stock required to approve such conversion under the applicable rules of Nasdaq, without the need for any action on the part of the holders of the Series A Preferred Stock. Each share of Series A Preferred Stock is deemed to have an original issue price of \$4.00 per share (the “**Original Issue Amount**”). The number of shares of Common Stock issued upon conversion of each share of Series A Preferred Stock shall be equal to the product of (i) the sum of (A) the Original Issue Amount *plus* (B) an amount equal to the cumulative amount of the accrued and unpaid dividends on such share at such time (regardless of whether or not declared or funds for their payment are lawfully available) *divided by* (ii) the Original Issue Amount, subject to adjustment.

Holders of the Series A Preferred Stock are entitled to receive cumulative dividends which will accrue quarterly on the last day of each applicable quarter (whether or not declared or funds for their payment are lawfully available) and will be payable quarterly, in arrears, on the earlier to occur of (a) the date any dividend is paid to holders of Common Stock with respect to such quarter and (ii) 30 days after the end of each quarter (the “**Series A Quarterly Dividend**”) at the rate per share of Series A Preferred Stock equal to the greater of (i) if the Company declares a cash dividend on the Common Stock with respect to such quarter, the amount of the cash dividend that would be received by a holder of Common Stock in which such share of Series A Preferred Stock would be convertible on the record date for such cash dividend and (ii) an annual rate (the “**Rate**”) of 8.0% of the Original Issue Amount per annum compounded quarterly with respect to such quarter. The Rate will increase by 2.0% on the first day of the first quarter ending on or after the 635th day following the closing date of the first issuance of Series A Preferred Stock and on each subsequent anniversary of such date.

The Series A Quarterly Dividend is payable in cash or in additional shares of Series A Preferred Stock (the “**Series A PIK Shares**”), at the option of the Issuer. The number of Series A PIK Shares to be issued shall be determined by dividing (i) the Series A Quarterly Dividend payable with respect to all shares of Series A Preferred Stock held by a holder thereof by (ii) the aggregate Original Issue Amount of all shares of Series A Preferred Stock held by a holder thereof, and each fractional Series A PIK Share will be rounded to the nearest whole Series A PIK Share (with 0.5 of a share being rounded down to 0.0).

Item 4. Purpose of Transaction

The information set forth in Item 3 of this Statement is incorporated herein by reference. The Reporting Entity holds the securities of the Issuer for investment purposes with a view to increase the Issuer's value and provide synergy.

Former members of Arq's board of directors became members of the Issuer's board. On February 1, 2023, the Issuer's board of directors expanded the size of the board from four to seven members and elected Julian McIntyre, Richard Campbell-Breeden and Jeremy Blank to the newly created vacancies on the Board, effective immediately. Each of Mr. McIntyre, Mr. Campbell-Breeden and Mr. Blank served under Arq's board and now will serve as directors until the Issuer's next annual meeting of stockholders and thereafter until a successor is duly elected and qualified.

Messrs. McIntyre, Campbell-Breeden and Blank each receive compensation for service as a non-management director of the Issuer consistent with the compensation generally provided to other non-management directors, as determined by the Issuer's board.

Except as set forth above, the Reporting Entity has no present plans or intentions which would result in or relate to any of the transactions described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

Item 5. Interest in Securities of the Issuer

(a) and (b) (and (d) See Items 7-11 and 13 of the cover page of this Statement and Item 2 and 3 above.

(c) Except as reported in this Statement, the Reporting Entity has not effected any transactions in the Issuer's securities within the past 60 days.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Pursuant to the Purchase Agreement, the Issuer acquired all of the direct and indirect equity interests of Arq's subsidiaries in exchange for consideration consisting of (i) 3,814,864 shares of common stock, par value \$0.001 per share, of the Issuer, representing 19.9% of the outstanding shares of Common Stock prior to the completion of the transactions contemplated by the Purchase Agreement, and (ii) 5,294,462 shares of Series A Preferred Stock, of the Issuer.

The Purchase Agreement contains customary representations, warranties and covenants.

Messrs. McIntyre, Campbell-Breeden and Blank, formerly board members of Arq, were nominated to the Issuer's board pursuant to the terms of the Purchase Agreement, whereby the Issuer agreed to increase the size of the Issuer's board to seven directors and appoint Messrs. McIntyre, Campbell-Breeden and Blank to the board.

The foregoing summary of the Purchase Agreement does not purport to be complete and is subject to, and qualified in its entirety by, the text of the Purchase Agreement, which is filed as Exhibit 1 to this Statement.

Pursuant to the terms of the Purchase Agreement, the Reporting Entity entered into a Registration Rights Agreement (the "Registration Rights Agreement") with the Issuer. The Registration Rights Agreement provides that as promptly as practicable following the closing, but no later than 150 days after the consummation of the transactions, the Issuer will file a registration statement registering the resale of the shares of Common Stock received by Arq and other Subscribers (as defined below). The Issuer will also use commercially reasonable efforts to have such registration statement declared effective as soon as practicable following the filing thereof.

The foregoing summary of the Registration Rights Agreement does not purport to be complete and is subject to, and qualified in its entirety by, the text of the Registration Rights Agreement, which is filed as Exhibit 2 to this Statement.

In connection with entry into the Purchase Agreement, on February 1, 2023, the Reporting Entity and the Issuer also terminated a previous transaction agreement, dated August 19, 2022. The previous transaction agreement would have provided, subject to its terms and conditions, for a business combination of Arq and the Issuer. By virtue of the termination of the Purchase Agreement, the previous transaction agreement became void and of no further force or effect, with no liability on the part of any party to the previous transaction agreement.

Separately, the Issuer also entered into subscription Agreements with certain persons (the "Subscribers") pursuant to which the Subscribers subscribed for and purchased shares of Common Stock for an aggregate purchase price of approximately \$15.4 million and at a price per share of \$4.00 (the "PIPE Investment"). The Subscribers in the PIPE Investment were shareholders of Arq.

Item 7. Material to be Filed as Exhibits

Exhibit 1 [Securities Purchase Agreement, dated as of February 1, 2023, by and among Advanced Emissions Solutions, Inc. and Arq Limited](#)

Exhibit 2 [Registration Rights Agreement](#)

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 13, 2023

Arq Limited

By: /s/ Richard Campbell-Breeden